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Relating to the Farm, the Garden, and the Household.

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The Farm.

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The Division of a Farm

There is no part of the work of the farmer in which economy both for the present and the future, can be more promoted, than in the division of the land that composes a farm. As a large portion of the farms of the State which have been improved within the last few years past, have been made from new land, it forms a very important part of the business of the farmer to be able to lay out his land into fields that will economise his labor from year to year.

The whole of the lands of the State are laid in regular forms or squares. All of the counties except where bounded by lake shores, are regular in form and contain a certain number of townships. These townships are each again divided into sections of a mile on each side, and containing 640 acres.—

These sections are again subdivided into half, quarter, 80 acre and 40 acre lots, and farms are composed of them. These divisions are all regular, with a few exceptions where they are fractional from the position of a lake or other local cause. As the sides of the sections all lie north and south, and east and west, and the township roads all lie in the same direction, it is easy work for a farmer to plan the clearing of land so that his fields will be regular in shape, and when once he has chosen the position for his house and barn, all his clearings may be made as regular in form as the government division of the land. And yet it is very seldom that we have found a new farm thus begun, and carried out. On the contrary, we find the clearing made without any regard to regularity, and the edge of a marsh, the winding of a creek, the ridge of a ravine, or some local inequality of the ground, governing the extent of the fallow. When the fallow is once burnt over and sown with grain, it has to be fenced, and the fence, and the subsequent cultivation, settles for many years the shape of the field, no matter how inconvenient or how expensive, or how totally disproportionate it may be.

When a farm, as is frequently the case,

comprises a quarter section of land, or 160 acres, it is of a square form, being 160 rods on each side. It will easily be seen that it may be divided into equal lots of 20 acres each by running a line either north and south, or east and west, and then subdividing on each side of it into lots or fields each of which would be 80 rods in length and 40 rods in width.—This regularity of form is of advantage in a great many ways in the after culture of the land, but at present we are merely discussing the economy of clearing.

As usual, the clearing is begun where the house and barns are located. The general practice is to locate them in proximity to the road, and in the middle of the lot or farm.—This practice, though seemingly wrong, is not so very uneconomical as might be supposed. In the first place when the land is uncleared the settler is not in a condition to remove to a great distance from the road, and undertake the work of not only making a quarter of a mile of roadway, but of keeping it in a good condition. By locating the house and barns near the road he has the use of it some times for years to reach a number of his fields, whilst all the road he needs is one to reach the wood lot which lies back from the road, and behind the cleared land. On a lot of 160 acres, therefore, with the house and barns in the centre of the road front, it will be noted that the land may be laid out so that there may be four fields of 20 acres each which will front on the road, and which may run back from it 80 rods, or half the width of the farm.

In clearing these fields, the utmost regularity may be observed. For instance, if it should not be advisable to attempt the clearing of over five acres in a single year, that five acres may be made to extend the whole width of the twenty-acre lot, on the road, and hence would be forty rods front towards the road, and twenty rods wide. So if only half that amount is to be cut, divide the area into two portions and two acres and a half is cleared. In this manner the lots can be laid out and cleared with a regularity so that each year's work is a continuation of what has been done the year before, and the whole is connected with what is to be done the next year.

Some regular definite plan like this, ought to be adopted where it is not. At the present season on nearly all new farms, there are pieces of land being cleared off, preparatory to being sown with wheat next fall; whatever the extent of these lands may be in proportion to the size of the farm, it should be the policy of every owner to see that the clearing is made with some design to connect it with the permanent improvement of the land. Where this is not done, it makes double work in fencing, and it prevents also the adoption of any systematic course of rotation or cultivation of crops, until the fields or lots are removed. The necessity of system and plan in this department of the work of the Michigan farmer, we hope to exemplify, so that it will be thoroughly understood.

Bones and Wheat.

Sir Robert Kane, the distinguished chemist, states that one pound of bones contains the phosphoric acid of 28 pounds of wheat. A crop of wheat of 40 bushels per acre, and 60 pounds per bushel, weighs 2,400 pounds, and thus requires about 66 pounds of bones to supply it with that essential material.—The usual supply of bone dust (3 to 4 cwt. per acre) supplies each of the crops for four years with a sufficiency of phosphoric acid, which is given out as the bones decompose. It may, therefore, be conceived what would be the effect of a double dressing of bones, renewed each year from time to time, by adding doses, all giving out the phosphoric acid by the slow process of decomposition.

The Turnip Afflicted.

An English correspondent of the *Gardener's Monthly* writes that the potatoe disease has visited that kingdom with unabated virulence, and seems as if it would drive that plant out of cultivation. We also note that a malady somewhat similar has made its appearance among the turnips; and for the last few years has been spreading. The cause of this disease is yet wrapped in obscurity, and many careful experiments give at yet no result that would indicate a cure.

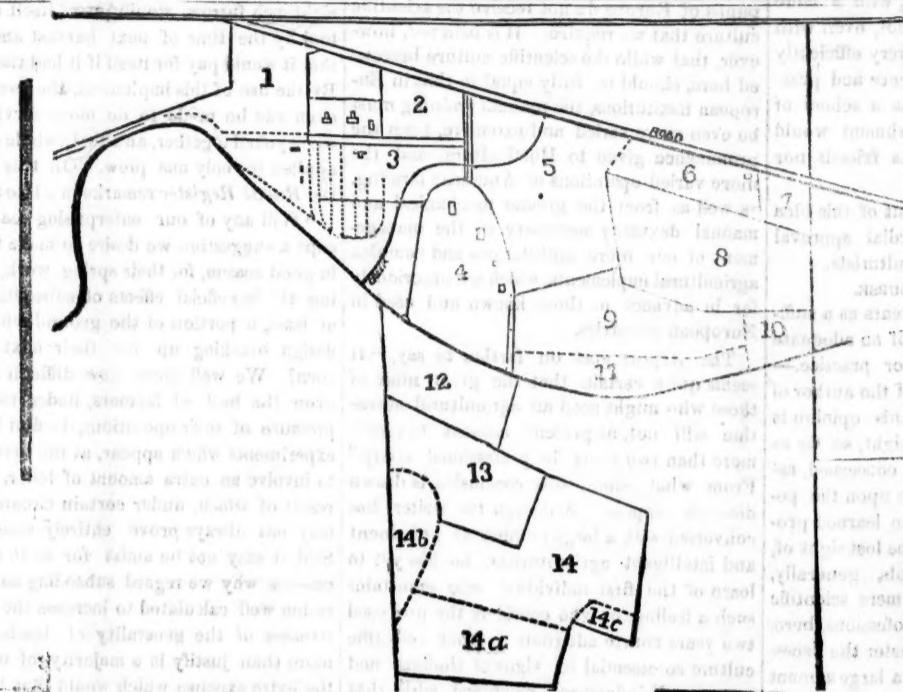


Diagram showing the portion of the Agricultural College Farm, as it has been cleared and fenced into lots.

The Division of the Farm of the Agricultural College.

No better exemplification of want of system in the clearing of a new farm can be found than that which is presented by the farm of the Agricultural College. Above we present a sketch of the farm as it now lies, and as it was at the opening of the term last spring. It will be noted that the above diagram does not present a full map of the whole of the land composing the Agricultural College farm, as it was deemed needless to allow in the present sketch, the space occupied by the unimproved wood land to appear.

The diagram above is only intended to present a plan of that portion upon which improvements have been made, and also to show the form of the fields as they are at present fenced and cultivated. It will be seen that there are eleven lots on the north side of the Cedar river, which is marked by the black line that runs east and west, and that there are three other improved lots on the south side of the river. An enumeration of these lots with a statement of the crops they have borne, or the use they have been put to during the past year, will explain in some degree the difficulties of remedying a want of plan or system in the beginning.

1. A field of nineteen acres, which had been partially cleared of wood and logged, but as yet unburnt. It is also unfenced. In the present form of the farm this lot would not be much altered; but were the Middle town road closed at the line of the farm and made a private avenue, this should form a part of the grounds to be used more for ornamental than economical purposes.

2. A lot containing fourteen acres, of which about six are occupied by the Professors' houses and the land attached thereto. The other eight acres are partially cleared and sown with clover. A large number of the old forest trees have been left in this lot for ornamental purposes, but they are dying out.

3. The garden lot, in which is located one of the Professor's houses. The portion occupied as a garden is that marked with dotted lines. The crooked line that is traced from lot five into this lot, is a brook that flows through a ravine. The west part of this lot has been occupied as a brick yard, and is partially a stiff clay, and in part a light sand.—Along the river bank there is also a strip of bottom land that during the past year was used to produce turnips. That portion of the lot east of the figure 3 is forest, and intended for a grove.

4. The College lot, in which are located the College building, that marked most to the north and west, next to it is the boarding hall, and then the brick building used as a barn, and next the pig pens. This lot has been partially seeded down to clover. It is only partially cleared; a large portion is full of stumps, other portions are occupied with small groves of young wood. No portion of it has been seeded down for permanent meadow or pasture, and in the course of a year or

two it ought to be broken up, and the whole surface remodeled, planned and laid down to be kept in grass permanently. The portion in front, or to the north of the buildings, wants enlarging, and might in fact be carried out to the plank road in the course of time. As this lot would always be used for ornamental purposes, it should be used in part as an arboretum, in which should be grown specimens of every tree and shrub indigenous to the State as well as those foreign ones that are adapted to the climate; and it should be made large enough to admit of this design being carried out.

It may be noted, all of these lots comprising together about 83 acres would properly belong to the horticultural department, and only incidentally to the Farm, when in the course of some years, they would be fitted for the work for which they are intended, namely, to illustrate the whole of the principles and practice involved in a complete knowledge of horticulture. To bring these fields to anything like what they should be in either form or cultivation, will require not only many years, but a very great and judicious outlay of labor, in which the work of one year must necessarily be a preparation for what is to be done the next, whilst the returns to be expected, whether in actual improvement, in the fitting for an end designed to be arrived at from the beginning, or in money, will be really of little account for the first five or perhaps even ten years.

On the north side of the Cedar river lie fields 5, 6, 7, 8, 9, 10 and 11, comprising in the whole nearly 106 acres. It will be seen at a glance that, in the clearing of these fields, no settled plan was adopted, and hence their very great irregularity. Of the effect which this irregularity must necessarily have on the economy of the farm for the next two or three years, we shall speak in the future—Meanwhile we proceed with a description of the fields as they now exist.

5. Contains 35 acres, and a portion of it is clay and a portion light loam and sand.—There was of this field about 7 acres in potatoes, and ten acres in roots, and about two acres of marsh on which nothing could be made to grow. The remainder was planted with corn.

6. The lot where 250 trees have been set out to form an orchard. There is no fence at the dotted line, which merely marks to where the trees come. This lot was planted with King Philip corn. The house in which the farmer resides is marked in the northeast corner. No arrangement either for orchard or farmer's house could possibly be worse, the one being along the road and interfering with the use of this portion of the land, which is not fitted for orchard purposes, and the other being at the greatest possible distance from the farm buildings, and from the points where the principal portion of the work is required to be done.

7. Is a small pasture lot, uncleared of stumps, used principally as a lot in which the

farmer has kept his cow, and stock.

8. A lot on part of which corn had grown the year previous, containing 23 acres. It grew oats the past year, and has been seeded with clover and timothy. It is as yet very rough, and contains many bad spots that need considerable work.

9, 10 and 11. Form really but one lot, as the dotted line that marks 10 on the west only indicates about seven acres of forest that has been left standing in that corner, and the dotted north line of 11, marks only the bottom and from which the timber has been cut, but not removed; 9 being the lot on which wheat was grown last season, and which is now seeded with timothy and clover.

These lots include all that portion of the estate on the north side of the river, which belongs to the farm department, and which is in some degree ready for use as farming land. Before it can be made available, however, for College purposes, or even as farming land, it requires to be platted out, subdivided, and the whole refenced.

On the south side of the river, there are fields 12, 13 and 14, which have been cleared in part. These possess the same irregularity of outline that characterizes the divisions of the farm on the north side of the river, and the fault occurs from the same cause; on the one side the plank road is taken as the base of operations, on the other the irregular line of the river is taken as the base. This is an exemplification of the general cause of error in the subdivision of farms throughout the whole State, and is not confined to the College farm.

12. Is a field from which the wood was mostly cleared last spring. On it the clearing has been more thorough than on any of the other lots. There is no standing timber left to interfere with future cultivation, and though not yet plowed, the brush and all the wood has been taken off clean. It grew a very light crop of oats last season.

13. Is a field on which wheat was grown last year, and has been seeded with clover. There are a large number of standing trees left in it.

14. Includes the whole of a large fallow of about 50 acres that was chopped last winter, and this fallow takes in the subdivisions marked *a*, *b* and *c*, which are noted by dotted lines. *a* marks that portion which has been logged and is now sown with wheat; *b* is a portion on which the timber has been cut, but has not been logged; *c* is a piece of marsh that has been cut over, and has been drained by a ditch cut during the past summer—the timber on it has not been logged; *c* is the corner of a tamarack marsh that commences here and runs south for about 40 acres. The wood on the corner has been cut, but not cleared off.

Having thus shown how the clearing has been made on this farm, we propose in our next to present a map of the whole of the estate planned out in some degree as it should be with reference to its economy as a productive farm, on which it is intended to pursue a complete course of tillage of all descriptions, and to carry it on in a business-like way, and not as a fancy speculation.

The State Agricultural College.

*Report of the Superintendent of Public Instruction.
The Intentions of its Founders.*

BY T. T. LYON, PLYMOUTH, MICH.

The Report sets out with the idea that the course of study "should comprehend such a series of instructions, and practical exercises, as may fit the pupils to become successful and scientific agriculturists": that the young farmer "should be permitted to study agriculture alone, without being compelled to the perusal of extraneous and irrelevant studies in order to graduate." It urges that an institution of general learning, with a mere bias towards agriculture, cannot, even with the aid of a model farm, serve very efficiently "to improve and teach the science and practice of agriculture"—that, "as a school of general education, its establishment would never have been urged by its friends nor voted by the Legislature."

The adoption and carrying out of this idea will doubtless meet with a cordial approval by the great mass of our agriculturists.

THE LENGTH OF THE COURSE.

The Report proposes two years as a sufficient time for the completion of an adequate course of study and out-of-door practice.—From the known experience of the author of the report in such matters, this opinion is doubtless entitled to much weight, so far as the mere scientific course is concerned, especially as he bases his opinion upon the periods of study necessary for the learned professions; but the fact seems to be lost sight of, that while professional schools, generally, confine their studies to the mere scientific branches necessary in those professions, here, the student must not only master the necessary sciences, but, also, spend a large amount of time in out-of-door operations, for the purpose of becoming an adept in their practical application; thus rendering the course equivalent to the scientific courses of other classes of institutions, with perhaps years of practice super-added.

The adequacy of a two years course is also inferred from the fact that most of the agriculturists of Europe have adopted courses of this length. The Institute of Agriculture at Hohenheim, Germany, "the most complete agricultural school in Europe," is quoted as an example. On looking over the programme of this Institute, we learn that the pupils receive no special agricultural instruction; that the School of Agriculture for the Upper Classes, which forms a distinct part of this institution, requires a two years course; but the students perform no out-of-door labor, and, of nine professors, employed in the Institute, they are required to attend the lectures of only three, selected at discretion.—It is a significant fact in connection with this department of the Institute, that it "has not been found to work as satisfactorily, or to produce so useful an effect as that for the peasant class, the farm school." In this department the students are required to labor on the farm, and to pass through a three years course before graduation.—It is also well worthy of note, "that the direction of all the great schools of agriculture in Wurtemburg" (in which this Institute is located,) "has been given to men who were educated in the peasant schools, and in no case, to any one educated in the agricultural schools for the upper classes; and this difference does not arise from the poverty of one class making them accept an appointment which the higher class would refuse."

At this Institute there is neither a botanic garden, nor any proper instruction in horticulture, or experimental farming, if we except a single field, which is subdivided into compartments of about a rood of ground each, which are devoted to experiments with new plants or manures.

At Grignon, near Paris, which is also quoted in the Report, the course extends through two years, although an additional residence of three months is necessary in order to graduate. "After the final examination, the student is commissioned to prepare a detailed report of how he would carry on the management of an estate which is supposed to be given him under certain circumstances. If his examinations and his report are satisfactory to the board, he receives a diploma of agriculturist; if not, he is sent back to his studies for another year."

At L'Institut Horticole of Gand, Belgium, devoted, as its name imports, exclusively to horticulture, students are required to pass through a three years course.

In all these institutions the instructions are continuous during both summer and winter, while it is understood that our institution will have a recess of three months, from December to March, thus cutting down the proposed two years to only one and one-half years. We must also consider that horticul-

ture is but little attended to in European institutions generally, while, here, it will necessarily assume an important position, especially as regards orcharding, which is rapidly growing to be an important element among the industrial pursuits of our citizens.

The Report says: "It is true that in some of the inferior agricultural schools of Europe, the course occupies three years, but those schools are designed for mere farm laborers, and their pupilage is a sort of apprenticeship to agriculture as a trade." From this we are left to infer that our graduates will neither need nor receive the manual training here spoken of, and, perhaps, that the peasant pupils of Europe do not receive the scientific culture that we require. It is believed, however, that while the scientific culture bestowed here, should be fully equal to that in European institutions, the manual training must be even more varied and extensive, from the prominence given to Horticulture, and the more varied operations of American farming, as well as from the greater mechanical and manual dexterity necessary to the management of our more multifarious and complex agricultural implements, which are notoriously far in advance of those known and used in European countries.

The report goes on farther to say, "It seems quite certain that the great mass of those who might need an agricultural education will not, at present, consent to spend more than two years in professional study." From what source this conclusion is drawn does not appear. Although the writer has conversed with a large number of prominent and intelligent agriculturists, he has yet to learn of the first individual who entertains such a feeling, or who considers the proposed two years course adequate to that scientific culture so essential to vigor of thought and maturity of judgement, combined with that practical knowledge and manual dexterity, so indispensable in the executive department of agriculture. To this we may add the consideration, that the future reputation of the college must depend upon the ripeness of its graduates, and that, with the present state of public feeling, it cannot afford to lose the prestige which the turning out of a class of thoroughly trained young farmers can alone secure. Indeed, the writer is prompted to the production of these strictures, by the apprehension that the adoption at the present juncture, of an inadequate course of study and training, can hardly be otherwise than fatal to the whole undertaking; and, that the Board of Education have been led to the adoption of this report, by the mistaken idea that the time requisite for the mastery of the necessary sciences, would also suffice to familiarize the students with the multitudinous manipulations which must occur in their practical applications to the process of the farm, the garden, the nursery, the orchard, &c.

As an illustration of a single phase of this difficulty, we will recollect that, with the opening of spring, the ground for the whole range of spring crops is to be prepared and seeded; the ground for a kitchen garden is also to be similarly treated; the nurseries will, at the same time, require a large amount of attention; while the pruning, grafting and plant of orchards, must also be attended to; to say nothing of the multifarious duties, not peculiar to this season. Now it must be recollected that each student must become familiar with all these processes. If, however, he can spend but two springs at the institution, and, as will be found to be the case, he cannot fully master two of them in a single season, it at once becomes obvious that he must remain longer than two years, or leave with an inadequate knowledge, or no knowledge at all, of some essential branches.

In order, apparently, to provide a remedy for some of these difficulties, a preliminary course of one year is proposed, of which some notice will be taken in a subsequent article.

A few Queries about Paint.

I wish some of your correspondents to give me the benefit of their experience through the FARMER, on the following questions, as I think it would be acceptable to many of your readers as well as to myself:

1st. What is the best substance with which to soak or coat fence posts, and what are the merits of tar, blue vitriol or other known compounds suitable for this purpose?

2d. Is there any paint or substance that can be applied to black ash shingles so as to make them durable?

3d. What are the merits of Blake's patent paint? I have seen it highly recommended by various persons of good authority. It is best known at Akron, Ohio.

4th. What is the most durable paint for wooden buildings?

Yours truly, M. McLAREN.

Lima, Washtenaw Co., Dec. 1859.

Subsoiling and its Uses.

In every instance that we have known, a larger corn crop has been produced by deep plowing than by shallow plowing. Men will tell you that they have invariably done better by putting on two yoke of oxen, and running the plow beam deep, than by plowing with only one yoke. Now why should they not divide the labor of the two yoke by obtaining the service of a subsoil plow. We noticed a very excellent one at the State Fair, made in the very best and most approved style by the Messrs. Moir & Hunter, of Northville, and which if tried, as the follower of a seven or eight inch furrow, would prove itself a useful tool by the time of next harvest and prove that it would pay for itself if it had the chance. By the use of this implement, the two yoke of oxen can be made to do more service than when yoked together, and their whole strength applied to only one plow. On this subject, the *Rural Register* remarks in a late number:

"Will any of our enterprising readers accept a suggestion we desire to make to them, in good season, for their spring work, by testing the beneficial effects of subsoiling upon, at least, a portion of the ground which they design breaking up for their next crop of corn? We well know how difficult it is for even the best of farmers, under the usual pressure of their operations, to find time for experiments which appear, at the first glance, to involve an extra amount of labor, and the result of which, under certain circumstances may not always prove entirely satisfactory. Still, it may not be amiss for us to state the reasons why we regard subsoiling as an operation well calculated to increase the productivity of the generality of lands, and to more than justify in a majority of instances, the extra expense which would thus be incurred. At this day, there are very few intelligent agriculturists, who do not firmly believe in deep plowing, though there are many who question the propriety of turning up to the surface any considerable portion of the under soil. But if deep plowing is avowedly beneficial, will not still deeper plowing result even more advantageously? To bring up the subsoil to the surface, and to break and pulverise the subsoil, but yet leave it in its old position, are two very different things. In the first operation, the crude soil is made not only the seed bed of the plant designed to be grown upon the field, but must also furnish the requisite nourishment for the plant in the earlier stages of its growth—which raw earth, containing, perhaps, all the mineral, but few other vegetable elements of fertility, and exposed for the first time, to the action of atmospheric influences, certainly ought not to be expected to do. It is no wonder, therefore, that where any considerable portion of the subsoil has been brought to the surface, the plant which has been seeded upon it becomes sickly and stunted; or that its roots, so situated, rarely acquire vigor sufficient to enable them to strike deeply into the more fertile soil which lies beneath, or that the natural consequence should be an indifferent crop. But when the surface soil remains what it should ever be, the appropriate seed bed, and the substratum is thoroughly stored without being intermixed at once with the superincumbent soil, the plant has all the benefit of a deep soil through which its roots may penetrate in search of nutriment or moisture, without experiencing any of its evil effects. Every farmer knows that one of the consequences of plowing the same field to the same depth for a succession of years, is to render the under soil so close and compact that water will not pass through it. The surface soil being shallow, the moisture which it ought to retain to supply the wants of the growing plant, and maintain the latter in the freshness and vigor, is speedily evaporated, and the result follows that the plant frequently suffers seriously from drought in our dry air and under our ardent summer sun."

A Good days Husking!

The New York Tribune states that Dan Scott, Jr., of Seneca Co., N. Y., husked in one day, working only nine hours, 97 bushels of ears of corn; 87 of which were good sound ears and seven of them poor corn. The ears were hulled from the stalks, which had been cut from the ground and shocked in the usual way; and the stalks he bound up as he proceeded. During the last hour he husked twelve bushels."

That was pretty good husking; but we think that the man who grew the corn, had done something for the husker, that does not seem to be counted in. There are some fields that D. Scott might go into, and we will defer to him to husk half that amount.

We have not seen it yet!

An exchange informs us that there is a Cottonwood tree in the town of Washington, Macomb county that measures forty five feet in circumference at the roots, or about fifteen feet across.

An Inquiry from Ganges about Cattle

A correspondent, Levi Loomis, of Ganges in this State, sends the following letter:

"I am requested by my neighbors and others to inquire, through your columns, what would be the best breed of cattle for us to cross with the native stock we have in this section. Very few here have had any experience. We want first the milking quality predominant, and then beef. Much is said about all kinds of stock, and each has its supporters, but still we do not have the opportunity here of knowing much on the subject. Our location here is on the east side of Lake Michigan, in a very new region. We would like to make a trial to improve, and some of us are determined to do something, and would be pleased to have you give us your opinion, and also would like to know what others say on the subject, and what the stock would cost.

"Yours truly, LEVI LOOMIS."

It is sometimes difficult to give a direct answer to questions relating to the stock of a region without having seen them. But knowing that section of Allegan county to be not only new, but much exposed to the northwest winds of Lake Michigan, we think that the cross that would prove most advantageous for its stock raisers at present, would be either the Devon or the Ayrshire breeds, and especially the latter where they desire to have milking qualities predominant. The Devon would give a hardier and thrifter cross, for they are native to a climate somewhat similar in many particulars to that which must prevail on the east shore of Lake Michigan, and their crosses are by no means deficient in milk qualities, especially rich milk. The Shorthorn would probably give more size, but on such lands as those of the extreme west of Allegan, we doubt if they would do as well as some of the smaller and more hardy breeds.

In relation to prices, we can not now particularize, but from the sales that have come to our knowledge, we should think a good Devon two year-old bull could be had for \$100 to \$175. A Shorthorn, of good quality would range from \$150 to \$300. We have several breeders in this State that could supply animals for crossing purposes, as well as any parties out of it, and there is a herd of Devons near Niles, that our correspondent might very easily visit, as they are close at home, and are as well bred as any in the country. Meanwhile, we are pleased to call the attention of stock men to the inquiries of our correspondent.

A Blackhawk in Berrien County.

The St. Joseph Traveler states that Mr. Yale of Middlebury, Vermont, has disposed of his stallion, "Black Hawk Billy" to a Stock Company in Berrien county for \$5,000. The Traveler adds: "As we have said before, some may think this a high price to pay for a horse, but all things taken into consideration he is cheap, and we think the farmers of this county are wise in retaining the horse here. Undoubtedly he will pay the company good interest on the investment, besides being the means of very materially improving the stock of horses in the western part of Michigan. The horse is to be delivered to the company this week, and will probably be kept by Mr. Hand, of Berrien, or Mr. Hayward, of Niles, till spring, when further notice of him will be duly given. Mr. Yale has been a very successful dealer in horses, and has kept several very valuable ones."

We are of the same opinion; meanwhile we hope to hear more by and bye of the service that this horse has rendered to the breeders of Berrien county. We shall watch with interest the benefit that will accrue from this very large investment, and which has undoubtedly been made in good faith, and with a desire to add to the value of the stock of the county. When we visit Berrien, which will be soon, we shall endeavor to pay our respects to this new star from the east.

Slabbering in Horses.

A correspondent of the Boston Cultivator says this is a disease in horses. Saltpetre, a tablespoonful for a dose, he has found to cure the very worst cases he ever had, and has not found it necessary ever to give the fourth dose. He gives a table spoonful in the morning, and in three days, if he is not free from it, repeats the dose.

Horses at the U. S. Fair.

There were sixty-six premiums awarded at the recent U. S. Fair in Chicago, for the best and second best horses and mares of all classes. These premiums were divided among the States as follows: Illinois 52, Wisconsin 13, Michigan 2, Vermont 1, New York 2, Canada 1, Ohio 1, Iowa 1, unknown 3.

MICHIGAN STOCK REGISTER.

DEVONS.

No. 41.—SIR DAVID. Bull. Calved March 15, 1859. Bred and owned by Andrew Elliot, Middlebury, Indiana. Sir, General Scott, by Young Duke of Devon; he by Duke of Devon imported. The dam of General Scott was Mariah, by Zach Taylor, by Lord Western imported. The dam of Mariah was Josephine, out of Lady by Old Devon, imported by King & Patterson. Zach Taylor was a remarkably good bull, and was for a long time in this State. His portrait is in vol. 13 of *MICHIGAN FARMER*. Young Duke of Devon was bred by Mr. Hamlin, of Erie county, New York, and was out of the imported cow Cherry.

Dam, Jenny, by Young Duke of Devon. g. dam, Harriet. g. g. dam, Old Cherry, imported and owned by G. S. Wainwright, N. Y.

No. 42.—CASSIUS. Bull. Calved March 20, 1859. Bred and owned by Andrew Elliot, of Middlebury, Indiana. Sir, General Scott, by Young Duke of Devon (see above).

Dam, Jesse, by Joshua, by Young Duke of Devon. Joshua was out of Rosa 2d, she from Rosa, from Dalrymple; from Victoria; from Lady, imported by King & Patterson.

g. dam, Jenny, by Young Duke of Devon. g. g. dam, Harriet. g. g. g. dam, Old Cherry, imported by G. S. Wainwright, N. Y.

To Directors and Teachers of Primary Schools.

In passing through the country and country towns of this State, and beholding the beautiful Union and Primary School buildings—the great responsibility devolving upon the Teachers of the Primary Schools in particular, comes before the view of my mind with such force, that I can hardly refrain from attempting to illustrate a little the important position they occupy, hoping these few simple remarks may induce some wise head, particularly in scholastic education, to take up and do this very important subject justly.

To do which, I would first propose taking a view of the nurseryman during the first year or two in a nursery of young trees—He well knows that his success in maturing good, healthy, perfect shaped trees almost wholly depends on the first year or two, or at most few years' training.

He, therefore, watches every tender shoot, and with the utmost care, endeavors to train them erect. If one from any cause inclines to grow too much top on one side, he immediately trims it off, or ties, a knot in some of the limbs, to prevent or check their growth, or if it inclines to lean to one side, he endeavors to set it upright by perhaps bending the young shoot, or may be by tying it to a stake, to keep erect until it becomes sufficiently set to bear its own weight; after which they need but little care, in comparison to the first year or two. To do this effectually, the nursery man must have plenty of help, or in other words he must not undertake to train more than he can do well; that none be neglected or overlooked.

This, to my mind, pretty clearly illustrates the position of Teacher and pupil in our Primary Schools. If these views are correct, how important then that we have competent Teachers, and that they have no more in charge than they can properly train without the neglect of one dear child. Teachers, remember that your responsibility, next to that of parents, is the greatest among men—see to it then, and seek wisdom from best authority to train the tender mind to stand erect; to endeavor to instill into it a desire to improve and to look up to manhood in hope that they may be an honor to their country and to their God.

This done, we have little to fear from the young pupil after he leaves the Primary department, in rearing an honest, industrious, intelligent community in which it is safe, and pleasant to dwell.

We will now close, hoping as before remarked, that some one better qualified will take up this, to me, very important subject, and do it that justice which it deserves.

Yours truly,

W. B.

Hogs at Cincinnati.

Up to last week there had been as many hogs packed at Cincinnati as there were in the whole of last year. There is a general impression that though the number of hogs in the pork raising states may be rather larger than last years yield, yet the hogs will not be quite so heavy.

How to prevent Sore Shoulders in Working Horses.

An exchange says, the plan we have tried and have never found to fail, is to get a piece of leather and have it cut into such a shape as to lie snugly between the shoulders of the horse and collar. This fends off all the frictions, as the collar slips and moves on to the leather and not on the shoulders of the horse. Chafing is caused by friction; hence this remedy is quite a plausible one, and is much better than tying slips of leather, or pads of sheep skins, under the collar.

The Garden & Orchard.

The Garden—Seasonable Hints.

It is too early at the present time in this climate for any kind of work to be done in the garden; but there are many preparations that can be made which will very much facilitate work, and gain time. Many of the farm houses throughout the State have no gardens as yet surrounding them. Others again have a plot at one side of their door yard which is dignified with the name of garden, but it is an awful perversion of the word to apply it to the plots. Others again have very good, well fenced lots, partially laid out as gardens, but in which there is little or no order or arrangement; and a few have well made, well arranged gardens in which a fine assortment of fruit and of vegetables is grown.

Those of the first class who have no gardens whatever, can very well improve their time, by getting the fencing stuff ready to be put up around the lot which they design shall be a garden next season. If they happen to be in a timber country, with no saw mill very close at hand, a rail fence is excusable; but only excusable when they find it to be too hard work to cut the posts, and it is impossible to procure from the mill the boards needed for a good post and board fence. For a garden of half an acre, (we dare not say a whole acre, for fear of scaring some of our readers from making any at all,) that is somewhat longer one way than another, it will need on the long side ten rods, and on the short side eight rods of fence, as it will be 165 feet long by 132 feet wide. If it is intended to fence it with a rail fence, it will take close upon 300 ten feet rails, to make it. If a post and board fence, it will need 50 good posts, and 900 feet of six inch fence stuff, which would give a fence of five boards high—allowing the lower board to be 12 inches wide—and ten pounds of nails.

A fence around a garden ought never to be a rail fence, for it is impossible with it to have clean cultivation. The garden never can be made to appear neat with the outs and ins of a rail fence as its back ground; besides it will nearly double the work; a post and board fence, or a picket fence, are therefore the fences which should be employed to protect the garden. A great many persons are in the habit of writing a great many fine things about hedges; but there are several difficulties in the way of cultivating hedges, that renders them of little use; and when any one undertakes to grow them, we only consider it a waste of time on a new place. In the first place the hedge would be very good and useful could it be had at the time it is most needed, and that is when the garden is new, its plants all young and tender and needing its protection. But if hedges are wanted, they have to be grown, and every one of them requires the protection of the fence, instead of affording it. Another point in relation to hedges is that they are an artificial production that needs the best skill of a good, well trained gardener to keep them in proper trim, and it is difficult to get a good man to either plant, trim or take care of a hedge. Hence we say do not attempt them. We have not yet seen a first rate hedge in this State, except once at Dr. Jewett's in Lima. There he had the beginning of some of the best hedges in the northwest, which we saw two years ago, and which he then promised to give us an account of, but which he has not yet forwarded.

Having planned the ground, its shape, and how it should be fenced for the garden, the next subject that should come up ought to be the division of the ground. If laid out in oblong form, and containing half an acre as above proposed, the whole may be made into five divisions. One of these divisions will be a wide border, say fifteen feet, around the whole outside, and lying between the fence and the broad garden road, which ought to go around the whole lot at a regular distance of fifteen feet from the fence. A twelve foot road will allow a cart or wagon to be used with ease and without disturbing the plants or beds. Besides this road there should be two of equal width, going from side to side through the centre at right angles with each other. These two roads will make the other four main divisions of the garden, and which may be each subdivided into beds running north and south or east and west as the taste and designs of the gardener may dictate. With the roads so laid out and such a width, the horse may be used to do a portion of the cultivation, if the planting is not so mixed that only the hoe or the spade can be used.

The Science of Gardening.

THE SAP.

As there is a very close similarity in the blood of all animals, so does the same resemblance obtain in the sap of plants. Uniformly it is limpid as water, its chief constituent, and contains an acid, salts, and mucilage or saccharine matter. The proportions, of course, vary.

The basis of this sap is the moisture of the soil and atmosphere absorbed by the roots and other organs; and that power of absorption is very great we have previously stated. Neither is it an indiscriminate power; for if the roots of a plant are placed in water containing two or more salts in solution, they will abstract different portions of those salts, and will reject some of them entirely. Thus, when 100 grains of each of the following salts were dissolved in 10,000 grains of water, and plants of *Polygonum persicaria*, *Mentha piperita*, and *Bidens cannabina* were made to grow in it, they took up six grains of sulphate of soda (glauber salt), and ten grains of chloride of sodium (common salt), but not a grain of acetate of lime.

The moisture from the soil absorbed by organs having such discrimination and absorbing powers passes up vessels situated in the wood, but especially in the albumen, impelled by their contractile power—a power so great that it drives the sap from the extremity of a cut Vine-branch with a force capable of sustaining a column of mercury thirty-two inches and a half high. If a proof of their contractile power, evidently resembling the peristaltic motion of the animal bowels, be required, Dr. Thompson justly refers for such proof to the evidence afforded by milky-juiced plants like the *Euphorbia peplus*. If the stem of this plant be divided in two places, the juice flows out at both ends so completely, that if it be again bisected between the two former cuts no more juice will appear. Now, it is impossible that these phenomena could take place without a contraction of the vessels; for the vessels in that part of the stem which has been detached could not be more than full; and their diameter is so small, that if that diameter continued unaltered, the capillary attraction would be more than sufficient to retain their contents, end, consequently, not a drop would flow out. Since, then, the whole liquid escapes, it must be driven out forcibly, and, consequently, the vessels must contract. (Thompson's *Organic Chemistry*, 988.)

The ascent of the sap has been endeavoured to be explained by M. Dutrochet, upon mere mechanical principles. He observes—"If one end of an open glass tube be covered with a piece of moistened bladder, or other fine animal membrane, tied tightly over it, and a strong solution of sugar or salt in water be then poured into the open end of the tube, so as to cover the membrane to the depth of several inches—and if the closed end be then introduced to the depth of an inch below the surface of a vessel of pure water, the water will after a short time pass through the bladder inwards, and the column of liquid in the tube will increase in height. This ascent will continue, till, in favorable circumstances, the fluid will reach the height of several feet, and will flow out or run over at the top and end of the tube. At the same time the water in the vessel will become sweet, or salt, indicating that while so much liquid has passed through the membrane inwards, a quantity has also passed outwards, carrying sugar, or gum, or salt along with it." To these opposite effects Dutrochet gave the names of—*endosmose* denoting the inward progress, and *exosmose* the outward progress of the fluid. He supposed them to be due to the action of two opposite currents of electricity, and he likens the phenomena observed during the circulation of the sap in plants to the appearances presented during the above experiment.

This hypothesis cannot be satisfactory; for such *endosmose* has no power sufficient to sustain thirty-two inches and a half of mercury, as is done by sap propelled by the vine, and it entirely fails to explain the discriminatory power possessed by the spongiolas, as well as the fact that the sap will be ascending on the heated side of a tree, whilst it will be quite unmoved on the side which is cold.

Thus propelled, the sap is distributed along each branch to every leaf, and to every fruit of the plant, gradually acquiring during its passage a greater specific gravity, not only by exhalation, but by dissolving the peculiar secretions of the plant formed during its previous year's growth, and deposited in the albumen from the sap during its downward course in the inner bark from the leaves. It is in the leaves that the chief elaboration of the sap takes place, and those peculiar juices are formed characteristic of the plant, and

which are found deposited there, or in the bark, or still further altered in the fruit and seed.

The ascending sap of the Vine, Elm, Beech, and some few others has been analysed, but the results are so similar that we need only particularise two. Dr. Prout, M. Robiquet, M. Deyeux, and others, agree in stating that the sap of the Vine (*Vitis vinifera*) has a specific gravity not greater than that of pure water, a fact explained by its containing much carbonic acid gas. Its taste is sweetish.—When 2,300 grains of it were evaporated to dryness, only one grain of solid matter remained, about half of which was saline, composed of tartate of lime and bitartrato of potash, and the remainder was a gummy vegetable substance.

Boussingault has analysed the sap of the Plantain (*Musa Paradisica*), finding in it tannin, gallic acid, acetic acid, common salt, and salts of lime, potash, and alumina. (*Journ. de Pharmacie*, xxii, 385.)

After being elaborated in the leaves the ascending sap is entirely changed in its qualities and constituents, and the descending sap is found to be either milky, gummy, resinous, astringent, sugary, acid or saline.

Milky descending saps.—We will only particularise that of the Lettuce (*Lactuca sativa*). This contains albumen, caoutchouc (Indian-rubber) wax, chloride of calcium, phosphate of lime, potash, gum, nitrate of ammonia, acetic, with another acid, and a bitter principle called *lactucarium*. In this lactucarium the peculiar flavor and properties of the Lettuce reside. It has been employed in medicine as a substitute for opium, possessing its soothing without its inconvenient properties.

Gummy descending saps are familiar to us in the Cherry, Plum, and Peach; but, in truth, all descending saps are gummy, for *cambium*, the substance deposited in all those parts of vegetables where growth is occurring, is chiefly gummy or mucilaginous matter.

The *resinous descending saps* are familiar to us in the Conifers; and the *sugary* in the Carrot, Parsnip, and Beet.

The *saline and acid descending juices* are still more varied and peculiar. Thus that of Wolf's Bane (*Aconitum lycocotonum*) contains citrates of lime and potash; *Delphinium elatum*, *Ranunculus aconitifolius*, *Thalictrum flavum*, *Clematis recta*, and *C. viticella*, all contain similar combinations of citric acid; Clary (*Salvia sclarea*) contains benzoate of potash; Rue (*Ruta graveolens*) contains malates of potash and lime; Agrimony (*Eupatorium cannabinum*) contains phosphoric and another acid; Spinach (*Spinacea oleracea*) contains oxalates of lime and potash, and malate and phosphate of potash; the common Indian Cress, or *Nasturtium* (*Tropaeolum majus*) contains phosphoric, nitrile, and malic acids united to lime and potash; Virginian Poke (*Phytolacca decandra*) contains oxalate of potash; and the Sorrels and Oxalis all contain an excess of oxalic acid.—J. in *Cottage Gardener*.

(To be continued.)

Fruit Growing in England.

In fruit growing, the "Golden Hamburg" grape, and the "Bawood Muscat" are generally well liked, and have kept well up this season. The grape crops have been good this year; we have had a fine dry summer, with plenty of sunshine, which in many situations, is very desirable for the perfection of the crop. So many failures have occurred at various times in attempting to grow such fruits as the Peach on open walls, that people think it advisable to make what are called glass walls, as a protection. These are heated by artificial means, and a crop is secured with far greater certainty than by trusting to the accident of a suitable season; we have lately seen several of these structures at Wortley, the seat of Lord Wharncliffe, and were informed by Mr. Law, the gardener there, that they were built quite as cheaply as if a fluid wall had been built instead on the old principle, and judging from the clean and healthy appearance of the trees, and the fine, well ripened condition of the wood, there seems every probability of an excellent crop.

A number of these places may be heated by one boiler; this is a great convenience to those who have the management, in some cases where fluid walls were used, and ten separate fires required to heat them by the substitution of the one boiler system; the work has been better done, of course cheaper, as far as fuel is concerned, and much labor economized, and the nuisance of the large quantities of smoke avoided. Another contrivance for fruit growing is the orchard house; these arrangements are pretty popular, particularly amongst the amateurs. In several instances surprising crops of fruit have been produced on Liliputian trees; in

other cases there has been great disappointment.

We prefer the glass wall as being cheaper and better and more certain; we have seen some very creditable Black Hambro' grapes produced under the shelter of these glass walls, and for the cultivation of some of our beautiful climbers these structures are very suitable. We have seen Rynchospermum jasminoides, Ceanothus dentatus, and several of the passion flowers, with many others in very fine condition; they were planted out in suitable borders with trellis at the back. I do not wish to be understood as saying that the peach and climbers do well together, only that the structure is suitable for either purpose and can be profitably or pleasantly employed, as the case may be. Glass is now so cheap, and so much of it can be heated by one fire, and the urgent demand for early vegetables and more fruit so pressing, that we confidently expect to see ground covered by the acre with artificial means of producing these requisites.

Loss of Queen-Bees—Wintering Bees.

This is one of the most severe casualties which the bee keeper has to encounter. On bringing home several swarms purchased of a neighbor, we discovered as they were placed on the stand, several droves run out of one of the hives. This was as late as November 3d, and the omen was a suspicious one, for it is well known that the workers kill off the drones as soon as the swarming season is over—except in very rare case—unless they have lost their Queen—in which case they retain the drones. A month later the bees in this hive were dead—the whole of them—and our suspicions were verified.

Let those who purchase bees look out for queenless colonies—they are worse off than "a church without a Bishop, a State without a King," especially at seasons of the year when there are no eggs or brood in the combs. Then they are a total loss.

Wintering Bees.—Since writing a former article on this little-understood subject, we found it necessary to change a plan then fixed upon for wintering bees in the open air. During the first fortnight of December, the sun shone out brightly almost every day, warming the hives (box hives) and drawing the bees out when the air was really so cold that thousands died during this time from becoming chilled and unable to gain the hive. During this time those colonies in the Langstroth hives subject to the same exposure very seldom offered to take wing—the sun not having so ready an effect upon the body of the hive. These colonies are strong as they were when put into winter quarters—the others are, I fear, greatly weakened.

Well, finding those in the box hives were dying off in such numbers, we resolved to try the plan of the Rev. Mr. Scholtz, of Lower Silesia, Germany, as described in the *Bienezeitung* (*Bee Journal*) of that country, and translated for Langstroth's work. We did not adopt his plan exactly, but the principle,

A trench was dug thirty inches wide, 15 feet long and three feet deep. The hives were placed directly over this trench on scantling, close together, and covered with a regular roof of boards, then a thick coating of straw, and on this a six inch coat of earth. Ventilating tubes, made of thin boards, placed at the bottom, reaching from inside to outside—four of them—furnish a supply of fresh air. These tubes are one inch in diameter inside. In cold, windy weather they are nearly closed, or are all closed but one, perhaps. In mild weather they are kept open. A small opening, like a chimney, is also left at the top, large enough to slide a thermometer down.

With this arrangement, we have almost perfect control of the temperature, and the bees are kept perfectly quiet, consume less honey and lose none of their numbers by leaving the hives. A building arranged in this plan, with double walls, would be better and less expensive in the end. Before the hives were placed in the pit, five and six holes were bored in the top with a three-quarter bit, to secure a free circulation of air and escape of all sweat and moisture in the hive.

CHAS. BETTS.

Pruning Pine Trees.

Oliver Butterfield, in the New Hampshire *Journal of Agriculture*, gives his experience in pruning his young timber trees, and says: "Two years ago, in the fall, I commenced pruning a lot of pine trees, four or five inches through at the butt. The first fall I cut off the lower tier of limbs with a saw when they were frozen. One year ago I cut off another tier, and this fall I have just cut off the third tier, and intend to continue the operation every fall till I get a smooth butt, long enough for a good board log. I find the wounds heal over fast, and the trees look green and healthy, while others in the same lot, pruned with an axe in the summer, three or four tiers at a time, looked stunted and sickly. Now, is the difference owing to the time or manner of pruning, or both?"

Seeding Down Orchards.

The *Country Gentleman* having made the following remarks upon a recommendation to seed down young orchards with orchard grass, the *Gardener's Monthly* replies as quoted below:

The *Gardener's Monthly* is an excellent practical paper, and we are therefore surprised to see in the last number a recommendation to seed down a young orchard the next spring after planting, with orchard grass. This recommendation is the more extraordinary as it immediately follows directions for the management of dwarf pears. All we ask the editor is, to try this mode alongside the practice of keeping up a system of *broadcast* cultivation by horse labor. We have seen both ways tried so often, with such invariable and striking results, that we supposed the matter settled long ago with all intelligent cultivators.

"In this instance we think still we are right. We are aware that 'the matter has been settled long ago with many intelligent cultivators.' But we think it is one that will not stay 'settled.' That fruit trees grow better, and seem more thriving for the first ten years under the system of tearing up the fibrous surface roots, we admit; but that they are permanently injured, we believe to be the fact.

"Cultivators are only now beginning to understand the importance of taking care of the surface fibres by shallow planting, surface manuring, and by every means encouraging the growth of the feeding roots at the surface of the ground. The old-school illustration of the wise man who 'dug about the roots of his trees,' cutting off their best fibres in order to 'admit the air to them,' we think will soon be blotted from the records of good culture. Our readers will not forget that to the recommendation criticised by our friend of the *Country Gentleman*, we added 'under the trees in an orchard so laid down in grass, the surface should every year receive a good top-dressing of manure or guano.'

HORTICULTURAL NOTES.

A Useful Hint on Transplanting.

A correspondent of the *Gardener's Monthly*, relates that, noticing the success which had attended the cultivation of a friend of his who was an amateur in gardening, he made some inquiries as to his method, which had proved by the handsome trees and rich and rare plants and fruits, how excellent his management had been, and says:

"My question was, 'How have you succeeded so well to have such thrifty and large surroundings in the few years of your occupancy?' He answered, I never fail in transplanting, if I strictly observe three rules. The first was, to mark the portion of the tree or shrub to be removed, in reference to the points of the compass, as otherwise its sap-strength after removal, may be exhausted, in the natural effort to change the condition of the misplaced southern bark, to a northern, its eastern, to a western and vice versa.

His second rule, he could not reason out as well except by practice and analogy, it was this: To set out all shrubs or trees, such as grow out of the earth, 'in the increase of the moon,' and all root plants, such as beets, carrots, etc., in the waning or decrease of the moon. Perhaps it may be reasoned, the general state of atmospheric electricity, which is so often beautifully set forth, when the summer shower from the clouds will cause the drooping grass to stand up in renewed beauty and vigor, is likewise more regularly influenced by the galvanic power of the moon's changing phases, instanced in its tidal power, its effect on the sexual system, the common belief in the solidity of the pork, when proper reference is had thereto in its killing.

His third rule, was to make the hole wherein the transplanted tree was to be placed sufficiently large to allow him to locate carefully the fine fibrous roots, as nearly in their natural, original position as possible, covering them carefully with the original soil. The philosophy of these rules may not be altogether acquiesced in; I only know his success was the admiration of all observers."

Grafting Cloth.

In some of your remarks on root grafting it will be well to caution those using waxed cloth, not to use it too freely. This knowledge cost me at least two hundred dollars during the winter of 1857; I root grafted 10,000, this being the first root grafting I ever did; I used the strips of cloth too long, winding the roots too much; consequence, cloth did not rot off, trees grew well but could not expand where the bands were, and at least one-fourth have broken off where bound. I presume there will be many in the same fix, and I am not unwilling to expose my past ignorance in order to have you caution others.—C. S. Kelsey, Indiana, in *Gard. Monthly*.

Best Composition for Shading Glass.

Sugar of lead ground in oil is recommended as the best composition for shading glass of greenhouses. The mixture should be greatly diluted with spirits of turpentine, and then applied with a brush kept as dry as possible. This is the mixture used by painters to imitate ground glass.

Scarlet Fruited Egg Plant.

The *Revue Horticole* gives an account of a variety of the egg plant which bears scarlet fruit, the seed of which was obtained from Portugal.—The plant grows to the height of three or four feet, with leaves six inches long. The fruit is about the size of a hen's egg, of beautiful scarlet color. It is recommended more for its beauty than its quality as a vegetable.

New Grape—The Labo.

The *Labo* grape is the name of a new variety, that has been presented to Mr. Mehan of the *Gardener's Monthly*, the past year, and is promising well. This grape has a very large berry, of a deep black color; the bunch is oblong in shape.—The flavor is rather sharp, but combined with a peculiar pleasant sweetness.

FOREIGN AGRICULTURE.

The Lois Weedon System of Husbandry.
FROM THE LONDON FARMER'S MAGAZINE.

A few numbers back a review appeared in this journal of a work on the Tullian system of husbandry, as revived and illustrated in the practice of Rev. Samuel Smith, of Lois Weedon, Northamptonshire, despite the ridicule and abuse of those who, like the late Sir William Curtis, are "quite satisfied with things as they are." This gentleman has now given the system a trial of twelve consecutive years, during which, without a particle of manure, he has grown wheat, year after year, upon half the land, reaping an average produce of thirty-five bushels per acre. The method of Mr. Smith is well known to our readers; the land having been kept open by the spade to subsoil depth, three rows of wheat are planted or drilled, at one foot distance between the rows, of course occupying three feet. The next three feet of land being left vacant, three more rows are planted on the other side of the void spaces, and so on throughout the whole field. One great point in this husbandry is, keeping the intervening fallows well tilled with the spade, and clear of weeds, during the growth of the crops upon the planted parts, and using the horse-hoe freely between the rows of growing wheat. As soon as this is reaped, the vacant spaces are at once planted; and so on, year after year, without any change of crops, application of manure, or cessation in the course.

It is not a little remarkable, that after all the efforts that have been made, with the aid of modern science, capital, and skill, to raise the fertility of the earth to the highest pitch it is capable of—after all the money expended in the manufacture and purchase of manure, in order to draw from the soil the greatest possible amount of produce—after the publication of innumerable books to prove that if you put nothing into the land you cannot expect to obtain anything out of it, and that for every cereal crop of grain grown, it is necessary to compensate the soil for the loss of elementary matters by a fresh supply in the form of manure—it is, we say, remarkable that we are called upon, in the very zenith of our agricultural glory, to retrace our steps and revert to the practice of a speculator, who, a century and a half ago, started a principle upon which, if true, the restoration of the fertility of the soil is based. Namely, that the atmosphere alone contains an abundant and everlasting supply of all the elements of fertility necessary for the growth and sustenance of plants.

This perfect competency of the atmosphere to furnish a supply of food for plants must be accompanied with an attractive power in the soil itself to absorb and modify the substances, and thus reduce them to a form in which their assimilation by the plants is promoted. On no other principle can a result so contrary to all the hitherto-received opinions and practice of agriculturists be accounted for. Every modern writer on agriculture, whether scientific or purely practical, has maintained the necessity of a constant application of manure, in order to compensate the soil for the exhaustion of cereal crop. It is for this purpose that herds of cattle and flocks of sheep are kept on our farms, it being almost universally asserted by farmers that they only repay the expense of their maintenance by the manure they produce, by which the produce of cereal crops is increased. Without absolutely endorsing this assertion, we may safely assume, from all experience, that, on the present system of farming, it would be impossible to grow corn profitably without manure; and that a constant succession of cereal crops, without it, would exhaust the most fertile soil in the world. We must therefore conclude that the secret of the success of the Lois Weedon system, which is a copy of Tull's, lies in the constant stirring of the soil under fallow, in order to promote the absorption of the elements of fertility. And, moreover, the proportion of that success depends upon the degree and depth to which the soil is stirred and comminuted. A remarkable corroboration of this opinion has occurred during the present season on the land laid down with Halkett's guideway-cultivator, at Wands-worth. This land has been deeply subsoiled, and comminuted with the Norwegian harrow, and planted with potatoes, without manure. On each side of it the land was tilled in the common way, and also planted with potatoes. The latter produced one bushel per rod; but the former yielded 2½ bushels per rod, being an excess over the other of 240 bushels per acre. This amounts to 7½ tons, which, at 25 per ton, is £37 10s. A similar result is obtained by Mr. Smith's spade husbandry over that of the plough, as practised by seven other experimenters on the Tullian system. The

average produce was 24 bushels 3 pecks per acre, whilst Mr. Smith's was 35 bushels. Their highest produce, also, was 27½ bushels per acre, whilst Mr. Smith's was 40 bushels. It is further worthy of observation that this system is so far from impoverishing the soil, that it seems to improve it; and that the produce, after twelve consecutive years' trial, has increased rather than diminished, that of 1858 being 40 bushels per acre. This is a very remarkable feature in the system, as it demonstrates the fact that tillage alone, by stimulating the soil and promoting the absorption of elementary matters from the atmosphere, is sufficient to sustain its fertility.

It is evident that if the Lois Weedon or Tullian system is what it has been represented to be—and there is not the slightest reason to suppose that any deception or misrepresentation has been practised—the expense of farming upon it must be much less, and the profit much greater, than on the common system. Accordingly, we find that whilst the profit upon a four-course rotation, according to Bayldon ("On Rents and Tillages"), does not exceed £1 5s. 3d. per acre per annum, that of the Tullian system is £4 2s. per acre per annum; being in excess of the other £2 16s. 9d., or considerably more than double. This, too, is under plough culture; but Mr. Smith's spade culture is still more profitable; for whilst the average produce is 35 bushels per acre, which, at 7s. per bushel, (Mr. Smith's estimate,) is £12 5s., his expenses amount to only £6 0s. 4½d., leaving a balance of £6 4s. 7½d. per acre, without reckoning the straw, which as no manure is required, may be sold to increase still more the profit.

The question then remains to be solved—can this system, which is so profitable on a small scale, be made applicable on a large one with an equally favorable result? We see no reason whatever to doubt the facts that are stated in the works we have referred to, derived as they are from sources beyond the suspicion of deception, and corroborating each other. It is a pity that the subject is not taken up seriously by the Royal Agricultural Society or the Central Farmers' Club, and experiments on a large scale instituted, in order to bring the system at once to the test as the most useful and profitable to the farmer, and consequently to the public.

There is one other question involved in these experiments, we think, worthy of notice—namely, whether manures do not act more indirectly as stimulants and absorbers of the elementary matters in the atmosphere than directly as fertilizers *per se*? We know the affinity of many chemical substances, which causes them to unite when placed in juxtaposition. Thus common salt, if placed on a reeking dung hill, or on any substance emitting ammoniacal matters, will be found to effervesce strongly. This is caused by the absorption of the ammonia; and it will continue until the salt is supersaturated, when it ceases, and the union thus formed is nothing less than the sal ammoniac of the chemist. This is a subject worthy of the attention of the scientific farmer, who will know how to turn it to his advantage, by applying the principle to his every-day practice.

Coal Ashes as a Fertilizer.

Wm. Leonard of South Groton, Mass., gives the following statement in N. E. Farmer, of his experience with this material as a manure:

"On an old moving field too much run down, we top-dressed a square piece of ground fairly with clear coal ashes, early in the spring. While the crop was growing, at all stages the difference was perceptible. When ready for scythe, it was more in quantity; and as to quality, it produced about equal parts of herd's grass and red clover. If the clover was not introduced by the agency of the ashes, we know not how it was introduced. For four years none was seen there before, or in any other part of the field, and this was the only clover seen in this field the past season.—Both grass and clover were more vigorous, green and lively within the top-dressed square, and just as visible all around was the exhausted crop, which said as audibly as grass could say, in its declining state, that it had received no such assistance from this individual fertilizer.

"On a hill side not at all renowned for its wealthy properties in soil, we planted the Davis Seedlings and Jenny Lind potatoes, in clear coal ashes, half a shovel full in a hill. Below, on equal y as good ground, we planted the same kinds of potatoes in compost manure, and the coal ashes, single handed, turned out the largest, best, fairest, and most numerous quantity of potatoes. In reality, they were the best we raised on the farm.—Almost side by side, in compost manure, our potatoes were somewhat infected with rot; in the ashes they were all healthy and sound almost to a potato."

Wines and Drinks.

A foreign periodical, speaking of the manufacture of different kinds of drinks, thus enumerates many of the kinds manufactured both in civilized and savage countries, and the enumeration goes to show how wide spread and general is the taste for these productions of vegetable growth, both among the inhabitants of the most advanced nations, and those who have made little or no progress in the arts, and that they are not confined by any means to the more northern latitudes:

A beverage called "chico de mirtilla" is obtained in Chile, from a species of myrtle berries, probably the *Laurus caustina*.—These are about the size of a large pea, of a deep red color, and of a peculiarly sweet and delicious aromatic flavor. They are prepared by crushing them in water, and allowing them to ferment for a few days. The Indians of South America make a pleasant sub-acid drink called "mistan," by boiling a quantity of roasted ripe plantains, which, after being reduced to a pulp, are allowed to ferment for several days. In the months of February and March the Australian aborigines prepare a luscious drink from the locap, a sweet exudation from the leaf of the mallee. In Abyssinia his Shoa Majesty has tedge, or honey wine, prepared for him, even as metheglin or mead was held in repute in olden times.

An old French author speaks in warm terms of praise of the maby, an Indian beverage, which he describes as a red wine, superior to the best poery of Normandy. It is thus made: Into thirty quarts of water are put two of clarified syrup, twelve red sweet potatoes (*Batatas edulis*), and as many oranges, cut into quarters. The mixture is then allowed to ferment about thirty hours.

Orange wine might be made a profitable article of export in the West Indies, Brazil, Africa, the East Indies, and other tropical regions, where the fruit is left to rot. A Sardinian pure orange wine—a valuable novelty prepared by P. Gavassini, of Genoa, solely from oranges that would otherwise be wasted—was rewarded with a prize-medal at the exhibition in 1851. It was reported on by the jury as a remarkably agreeable beverage, strongly resembling fine Lunel, in flavor, aroma, and quality. Much might be said upon the manufacture of sweet or home-made wines in this country, which, is, comparatively speaking, little attended to, except by a few manufacturers.

An excellent cider beverage may be obtained from the juice of the pine-apple by fermentation. Old Ligon, the early historian of Barbados, writing in 1657, speaks in raptures of it:

"The last and best sort of drink that this island or the world affords, is," he says, "the incomparable wine of pines, and is certainly the nectar which the gods drunk; for on earth there is none like it; and that is made of the pine-juice of the fruit itself, without commixture of water or any other creature, having in itself a natural compound of all tastes excellent that the world can yield.—This drink is too pure to keep long; in three or four days it will be fine; 'tis made by pressing the fruit, and straining the liquor, and it is kept in bottles."

In Mexico, a most nourishing and refreshing beverage known as *tepache*, is compounded of pine-apple juice, parched corn, and sugar.

The fresh sap of the maguey, or large American aloe, known as aguamiel, is often drunk unprepared, and much relished as a delightful beverage; but it is usually fermented, and made into the stronger drink called "pulque," which best suits the Spanish taste in Mexico. The sap of the *Bromelia Pinguis*, when properly prepared and allowed to ferment, makes a pleasant drink, which is considered little inferior to ordinary champagne.

The fermented juice of the sugar-cane contains chemically the same alcoholic principles as the apple, the pear, and the grape. In Normandy, in order to obtain good cider from different kinds of apples, it is customary to leave them in a garret for a certain time. So if the canes are left to themselves, after eight or ten days, they assume the same vinous smell as apples, and if used in that stage would produce a cider beverage. But at the end of about twelve days the canes will be fit state to produce wine. They must be pressed in a mill, and the juice received into the cask partially open at the top, and little exposed to the air. After being left for some time, that the fermentation may proceed, it can be bottled, and will in a short time sparkle and pop like champagne. The longer the wine remains in bottle, if well secured, the more it will improve, until it becomes exquisite. By adding to the must or sweet wine the juice of some fruit—such as

the pineapple, orange, lime, guava, or mammy-sapota—a wine is obtained possessing the aroma and flavor of the fruit employed; or advantage may be taken of the perfume of the pomeroze, granadilla-flowers, or orange-flowers, &c., to obtain scented wines. It may also be colored red with the juice of the cactus fruit, or prickly pear.

It is thus seen that Nature, very far from having deprived the torrid zone of fruits and plants adapted to the production of an agreeable vinous drink, capable of alleviating the thirst which is felt by the inhabitants of those burning countries, has enriched it with several, especially the cane, which presents in its sugar the purest aliment, and in its fermented juice the most abundant source of a wholesome drink. The cane lends itself to every taste; like the apple or grape, it is made optionally to yield cider, wine, or brandy.

A Temperance Column.

We notice with much satisfaction that the movements of the friends of temperance, and of the prohibition of the sale of intoxicating liquors, are more active than they have been for some time past. The complete surrender to the liquor traffic is bearing its fruits in the city of Detroit, and causing citizens who are anxious to promote good order and a decrease of taxation to give the subject a greater attention than has heretofore been accorded to it.

See that the feet lie well together, and press straightly upon the ground, as also that the claws are even, upright and healthy. Many say that the form of the head is of little or no consequence, and that a good hog may have an ugly head; but I regard the head of all animals as one of the very principal points in which pure or impure breeding will be the most obviously indicated. A high bred animal will invariably be found to arrive more speedily at maturity, to turn out more profitably than one of questionable or impure stock; and such being the case I consider that the head of the hog is by no means a point to be overlooked by the purchaser.—The description of head most likely to promise, or rather to be concomitant of high breeding, is not one carrying heavy bone, not too fat on the forehead, or possessing too long a snout; the snout should be short, and the forehead rather convex, curving upward; and the ear should be, while pendulous, inclining somewhat forward, and, at the same time, light and thin. Nor should the buyer pass over the carriage of a pig. If this be dull, heavy and dejected, reject him on suspicion of ill health, if not of some concealed disorder actually existing, or just about to break forth; and there cannot be a more unfortunate symptom than a hang-down, slouching head. Of course, a fat hog for slaughter, or a sow heavy with young, has not much sprightliness of deportment.

the vices and miseries of hundreds and thousands of beings wasted and ruined by their traffic. Let us have the co-operation of every good citizen and speak out loud and strong, till the city authorities pass a law that will secure the services from our officers for which they were elected—the enforcement of the law, and the detection and punishment of its violation.

The Points of a good Hog.

A writer in an English paper gives the following as the points of a good hog:

1. Sufficient depth of carcass, and such an elongation of the body, as will insure a sufficient lateral expansion. Let the loin and chest be broad. The breadth of the latter denotes good room for the play of the lungs, and a consequent free and healthy circulation, essential to the thriving or fattening of any animal. The bone should be small and the joints fine; nothing is more indicative of high breeding than this; and the legs shall be no longer than, when fully fat, would just prevent the animal's body from trailing on the ground. The leg is the least profitable portion of the hog, and we require no more of it than is absolutely necessary for the rest.

2. See that the feet lie well together, and press straightly upon the ground, as also that the claws are even, upright and healthy. Many say that the form of the head is of little or no consequence, and that a good hog may have an ugly head; but I regard the head of all animals as one of the very principal points in which pure or impure breeding will be the most obviously indicated. A high bred animal will invariably be found to arrive more speedily at maturity, to turn out more profitably than one of questionable or impure stock; and such being the case I consider that the head of the hog is by no means a point to be overlooked by the purchaser.—The description of head most likely to promise, or rather to be concomitant of high breeding, is not one carrying heavy bone, not too fat on the forehead, or possessing too long a snout; the snout should be short, and the forehead rather convex, curving upward; and the ear should be, while pendulous, inclining somewhat forward, and, at the same time, light and thin. Nor should the buyer pass over the carriage of a pig. If this be dull, heavy and dejected, reject him on suspicion of ill health, if not of some concealed disorder actually existing, or just about to break forth; and there cannot be a more unfortunate symptom than a hang-down, slouching head. Of course, a fat hog for slaughter, or a sow heavy with young, has not much sprightliness of deportment.

Liquid Manure.

Soda Ash is considered one of the most valuable agents, when dissolved and diluted, that can be used in the nourishment of plants. Four pounds and a half of ashes, with three pints of quicklime, placed in three gallons of hot water, stirred occasionally, and allowed to remain for three or four days, will make, when diluted with rain water, 192 gallons of manure, that may be applied with the greatest confidence to kitchen-garden crops and soft-wooded flowering plants in the pleasure garden. It is suitable for light, sandy soils, and its effects are steady, certain and lasting; but in using it for vegetables, it will be advisable not to apply it to seed, nor until the seedling plants have expanded their second leaf. Then it may be given to them in the evening, after the sun is hid behind the hills, or when he is overcast, and the day is likely to continue so throughout, or when rain is falling from the clouds; then the watering pot may be taken, and the ground drenched with the liquid, so as to be likely to reach every fibre. This I practice two and, in some cases, three times a week. It is, perhaps, one of the most suitable liquids that can be given to cauliflower, endive, and celery, as it does not, like those of a more stimulating nature, induce prematurely the elongation of the flower-stem; at the same time, it leads the plants to the full development of their character, except in cases where the seed has not been of the right kind.—Ex.

Spring Wheat at Chicago.
On the first of January, spring wheat was graded as follows in the Chicago market, and this grading is to continue for the year: No. 1 must weigh 59 pounds to the measured bushel; No. 2 must weigh 56 pounds; and rejected 45 pounds. These are the three established kinds of spring wheat.

SHELTERED ANIMALS.—An English experimenter demonstrates that sheltered sheep eat one-third less of linseed cake and two pounds less of turnips per day; and yet, notwithstanding this, the increase of those housed, as compared with those that were not, was as fourteen to nine.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, JANUARY 7, 1860.

Take Notice!!

We send this number to all the subscribers of 1859, and would be gratified to have them show it to their immediate neighbors who are not in receipt of the FARMER, and thus use their influence to extend our circulation for 1860. We also hope to have all our old friends who have aided us to pass through the trying times of the past hard season, when there was such a heavy crop of "Nothing to sell," continue their patronage, by sending in their orders for a renewal.

We have to thank many of them already for the encouragement which they have sent in, and also for the continued efforts they are making, and which they have promised to keep up in spite of taxes, and short crops.

The New Year—The New Volume.

With the new year commences the *Nineteenth Annual Volume* of the MICHIGAN FARMER, and the Second Volume of the Weekly, and to all its friends and readers it presents its best wishes, and hopes that 1860 may bring to them health, happiness and prosperity.

Perhaps I shall give it to you soon.

Yours, H. McC."

We hope our correspondent will give us the experience; it is the failures, or the mismanagement, that frequently teaches as much as the most important successes.

Worth Noting—How the Dry Goods Come In.

Nothing probably marks the progress of the country in a greater degree than the value of the imports of dry goods; at the same time it is well to consider how these imports affect the country. Every one who has a recollection of the fierce and turbulent political warfare that has been carried on since 1832 over the tariff and the doctrines of protection and free trade, will also have come up before his memory how often the country has either been about to be ruined, or else there was to be a perfect millennium of cheap goods, to supply all our wants, whether we had money to buy them or not. And yet, after all the turmoil and fears, and boasts, we believe the country is safe as yet! and we enter upon 1860, with a renewed hope that it will not reach the jumping-off place until after 1870. Meanwhile, let us look at what has been done in the way of helping along foreign manufactures during the past ten years. We take our figures principally from a table we find in the *New York Economist*.

In 1849, our own folks used up woolen goods, the manufacture of foreign countries, to the amount of \$11,983,279; in 1859 they bought in woolen goods to the amount of \$37,329,041. Our young folks will have fine broad-cloths and nice French Delaines. In 1849, English, French and other foreign calicos and cotton goods cost the country only \$6,519,972; in 1859, crinolines, hoops, the fashions, and the Empress Eugenie, together with the increase of population, made us pay \$27,781,264 for the same kinds of articles.

In 1849, the silks of Lyons and the other manufacturing towns of Europe cost us the moderate little sum of \$15,295,753; while in 1859, the same causes that increased the consumption of cotton goods, run the consumption of silks in all their interesting varieties up to \$33,682,647.

In 1849, what the French call "lingerie," and what we would call the little delicate articles of linen that set off our beaux and belles, and finishes off their more gaudy silks and cottons, with cambric and laces, came to only \$4,756,561; in 1859, these little trifles amounted to \$11,129,484.

In 1849, the miscellaneous articles that did not come under any of the above classes, (and there are undoubtedly some things in the way of dry goods that it would puzzle a Commissioner of the Patent Office to classify) came to \$3,959,210; in 1859, these same miscellaneous productions reached \$6,366,052.

To sum up, the foreign dry goods used in 1849, amounted to forty-five and a half millions of dollars; in 1859, our fellow citizens and sister citizenesses, have materially improved upon the consumption of ten years ago, and used up the enormous amount of one hundred and twelve millions worth of foreign dry goods.

Now one of the best wearing suits we ever had was made of cloth manufactured at Milford, in the State of Michigan, and we do think that if a few of the cloths sent abroad

The Spirit Abroad.

A friend of the FARMER, who has interested himself in getting up a club in a locality where we had not any subscribers last year, writes: "I shall add to the list as soon as possible. Almost every one is willing to take the paper here, but the tightness of the times, they say, prevents them, which I presume is the case; but if they were to take the FARMER for one year, they would find it as difficult to get along without the information it gives them, as to try to do without salt. I am well satisfied that if I had taken the FARMER the past ten years, instead of eastern papers of little real value to us out West, that I should have been worth two to five hundred dollars more than I am now. I do not pretend to say that a man might not injure himself by endeavoring to follow out all the teachings it conveys; but if a man will consider and weigh his own position, and then apply what he can learn from it, he will find himself better off at the end of the year ten times the amount of the subscription." Many think that writing on farming is only intended for the rich, but I think the main difficulty is that we pioneers have not confidence enough in ourselves, and do not make known what we want to know. For instance: I could give you some of my difficulties in setting out an orchard, whereby I lost some hundred or more trees, and which I could have saved by a little knowledge of what the FARMER has taught the past year. Perhaps I shall give it to you soon.

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Now one of the best wearing suits we ever had was made of cloth manufactured at Milford, in the State of Michigan, and we do think that if a few of the cloths sent abroad

were retained at home, and applied to encourage home trade, it would help us amazingly to find money to pay our taxes, and find work for "many now idle hands to do."

Wool—Foreign and Domestic Prospects.

The great wool sales in London, being the imports from the several wool growing colonies, have been progressing during the month of December, and we note that the result of these sales have been thus summed up in the circular of Messrs. Hazard & Co.:

"The firm tone exhibited at the termination of the July and August sales was fully maintained up to the opening of the series. The attendance of the home trade has been very full and regular, and the competition for good and superior wool (of which the quantity was small) has been remarkably animated. Prices may be quoted 1d to 2d per lb. higher than July and August sales on Sydney, Port Phillip, Van Dieman's Land, and Adelaide wools, especially on the better classes of combing fleeces, upon which in some cases a greater advance has been obtained. Cape wool has not exhibited any change, with the exception of the better sorts, which have shown 1d per lb. advance. The quantity of low inferior wool from this quarter has been very large, and sold at comparatively little spirit at former rates. Long-stapled has been much wanted, and would have fetched high prices. The drought which visited the colony prevented much wool from being shipped in time for the sales just ended, and has no doubt injured the condition of the wool and caused the loss of quantities of sheep, which for a time must check the increase which has been annually observable in the exportation of wool from the Cape. There is every prospect of present prices being fully maintained, and should the consumption of the raw material continue at its present rate, wool will be much in request before the commencement of the February sales, 1860, as for some months past manufacturers have been fully employed upon actual orders in hand. Although the state of political affairs was unfavorable to our market, and prevented many continental buyers attending the sales, restricting the operations of those who did come, the result indicates a sound and healthy state of the trade."

It will be seen from the above remarks that we have every reason to believe that the present rates will be fully maintained, during the whole winter, and that spring will open with even better prices than has yet been paid, prevalent in the markets.

Walter Brown of Pine street, N. Y., in his circular, confirms this opinion of ours, and says, speaking of wool in the eastern market:

"We have six months yet before the new clip can be reached, and it is estimated that the stock in hands is lighter than at this time last year; and we see no cause why desirable domestic fleeces should not improve in price at least enough to pay the interest of carrying them."

He also says of the present state of the wool trade:

"The domestic wool market for the past month has been characterized by the quietness which usually prevails in all kinds of business at this season of the year. Manufacturers are occupied at their mills in taking stock and closing up the year's business, and are therefore running on as light a stock as possible, and will be under the necessity of coming soon into the market for further supplies—so that an active trade may be expected for the two months next ensuing. There has been no material change in prices since the auction sale in Philadelphia, and the stock in market being very light, holders of good lots are very firm, and in some cases an advance in prices has been reported."

Book Notices.

THE WHEAT PLANT: Its origin, culture, growth, development, composition, varieties, diseases, &c., together with a few remarks on Indian corn, by John H. Klippert, Corresponding Secretary of the Ohio State Board of Agriculture, &c.

A large portion of this volume was originally prepared as an essay on the wheat plant, and published in the Report of the Board of Agriculture for the State of Ohio for 1857. The preparation of that essay, however, indicated to the author that he had not quite mastered the whole subject, and hence the preparation of this work, which is much more full, and is really the most valuable contribution, so far as the wheat plant is concerned, to agricultural literature, which has been issued from the press. As a matter of course the work is not original, but the author has taken due care to give full credit to all the sources from whence he has drawn much of the information which he has imparted; and he has collected and put in tangible shape, not only his own experience, and results of the experience of the wheat growers of his own State, but also information relative to this important cereal, which was scattered throughout a vast number of publications, and which could not very readily be referred to even with the aid of the public libraries. We have only space to glance at the contents at present; we shall refer to this work more at length in the future, as we shall occasionally avail ourselves of its information.

The author first takes a general view of the organic world, and explains some of the principles of hybridization; then follows a history and description of the cereals and grass tribes, and a history of the wheat plant with an inquiry into its origin, its structure

and composition, a description of its germination, its nutritions, with a chapter on soils, and an account of the experiments of the German investigators, of Gilbert and Lawes, the English experimenters. There are also chapters on the growth of the wheat plant, on its botanical position, its culture, the soils adapted to its growth, its varieties, its diseases and its enemies. A chapter is also added on the history of Indian corn, with its analysis and tables of its production in Ohio. The subjects are illustrated by a number of engravings, which illustrate the subject very fully.

This work has been issued from the press of Moore, Wilcock, Keys & Co., Cincinnati, and is for sale in this city by W. B. Howe, bookseller.

AN OVERLAND JOURNEY TO CALIFORNIA IN THE SUMMER OF 1859, by Horace Greeley. Published by C. M. Saxton, Barker & Co., New York.

The author of this book is the well known editor of the *N. Y. Tribune*, and the work consists of the letters he wrote during the trip he made last summer across the continent to the Pacific. Many of the letters we read at the time they were published in the daily newspapers, but on glancing over this volume we find them as fresh, and more interesting than when first perused. The letters form a faithful photograph of the route, and some of country through which the traveler passed. Much of the routes had never been passes over before, and none can read them without being impressed with the conviction that they are as faithful as sun pictures. The chapters on the Mormon settlements and the Mormons themselves, are of the highest interest, as giving an account of that people that must be acknowledged to be the most reliable and unprejudiced that has yet appeared in print.

The work is for sale by Putnam, Smith & Co., booksellers, under the Russell House, Detroit.

Our own State Press.

[Continued from page 418, vol. 1.]

GRATIOT COUNTY.—This is a new county and has as yet but one newspaper, the *Gratiot News*, now edited by M. Tompkins. The late editor, in his valedictory, which has reached us, seems to indicate that some of the patrons of the *News* don't "pay the print er." The *News* is published at Ithaca, not the home of the industrious Penelope, but of the county seat of Gratiot, Michigan.

HILLSDALE COUNTY.—In this county there are three newspapers. The *Hillsdale Standard*, published by H. B. Rowson, is the Republican organ, and the *Hillsdale Democrat*, by N. B. Welper, is the Democratic exponent. At Jonesville the *Independent*, by H. N. F. Lewis, is a spirited sheet, that tries to pass along without rushing against the Scylla of the Democracy or into the Charybdis of the Republicans. Of course it needs a wonderful pilotage, and Lewis holds the helm with great skill.

INGHAM COUNTY.—This county has three newspapers, two of which are published at Lansing and one at the county seat. The *Lansing Republican* is edited by Rufus Hosmer and published by Hosmer & Kerr, the printers for the State. The *State Journal* is Democratic, and is conducted by J. M. Griswold, Esq., who is also the popular postmaster. The *Ingham County News* is published at Mason, the county seat, by D. B. Harrington, Esq., and is neutral in politics.

IONIA COUNTY.—The *Ionian Gazette*, Republican in its politics, was for a long time the only newspaper printed in this county. We have not seen a number of it for a long time, but it was a well conducted paper. The *Ionian Weekly Journal* has recently been published at Ionia, by Messrs. Geo. W. Wilson and R. W. Huskins, and is the representative of the democratic party of that county. These gentlemen are making a good paper.

JACKSON COUNTY.—Jackson county is represented by two old substantial veterans, whose hard knocks frequently disturb their neighbors. Both are published at Jackson, the republicans being faithfully attended to by the *Citizen*, edited and published by C. V. DeLand, Esq., and the democrats as well by the *Patriot*, edited and published by B. F. Bouton, Esq.

KALAMAZOO COUNTY.—This large and populous county has but two newspapers, namely, the *Gazette*, published and edited for many years by Volney Hascall, Esq., a firm, reliable democrat; and the *Telegraph*, the representative of the republican interests, edited and published by H. E. Hascall, Esq. Both are first class papers in size and management.

KENT COUNTY.—Grand Rapids is the centre of Kent county, and it is there that the press of that county is issued. The *Grand Rapids Eagle*, conducted by A. B. Turner, Esq., is published both daily and weekly, and is staunch republican. The *Enquirer and Herald* is the democratic exponent, and is conducted by A. E. Gordon, Esq. It is also published daily and weekly. The *Great Western Journal* is a large quarto, edited and published by Thomas D. Worrell, Esq., and is devoted to literature and news.

[To be continued.]

Let our readers give attention to the article under Foreign Agriculture entitled the "Lois Weeden System of Husbandry." There are some suggestions in it worthy of remark. For instance, we published a statement in our previous volume, that a discovery had been made by a German Chemist named Brustlein, that the soil possessed the property of holding certain fertilizing matters as a sponge holds water, and it was evident that the finer the soil, the more it was worked, this property was increased. The Lois Weeden practice with wheat seems to confirm the truth of this assertion; as well as that the atmosphere contains in a great degree, if not totally the elements of fertility. Are not our farmers aware of this when they plow deep for corn, and when it is a well known fact, that the growth of the crop is promoted more by constant working it with the horse, than by the best of manure and no work?

We call attention to the interesting article on the subject of temperance which will be found in this week's paper. It is our intention from time to time to keep the readers of the FARMER informed of the progress of this most humane and beneficent of all modern reform movements, as it is one in which all classes of community are concerned, and the battle against a common enemy is fought on ground where all can meet, regardless of party politics or religious creeds. It is a cause which appeals to the pockets of tax-payers as well as to the hearts of philanthropists, as will be seen by the statistics given in another column.

The eighth annual meeting of the United States Agricultural Society, is to be held at the Smithsonian Institution, in Washington, on the second Wednesday in January, 1860. Among the topics to be discussed, are the Establishment of a department of Agriculture, the steam plow, the culture of sorghum imphoe, undraining, and forest-trees. It is reported that the Hon. Henry Wagner of New York, will probably be chosen President, and that the next exhibition will be held some where in New York.

Literary News.

The Scientific American commences a new volume with the new year; and we note that the Hon. Judge Mason of Iowa, who was so long and favorably known as the United States Commissioner of Patents, has been associated with Messrs. Munro & Co., in the conduct of their business, at the Scientific American office, New York.

J. M. E. Nelson & Co., of New York, are the publishers of the *United States Journal*, a monthly that contains a large amount of literary matter, and they have got up to go to each subscriber for 1860, a very handsome lithograph of the celebrated painting by the French female artist, Rosa Bonheur, entitled "The Horse Fair." This lithograph gives a very good conception of that world-renowned picture, and makes a handsome ornament framed.

The American Journal of Science and Arts, conducted by Professors B. Silliman, B. Silliman, Jr., and James H. Dana, in connection with Prof. Asa Gray, Prof. Louis Agassiz and Dr. Walcott Gibbs, commences a new volume with the January number. This magazine is the great journal of science in this country, and should be sustained much more liberally than it is. The very scientific nature of the contents precludes it from that general circulation that a journal of a lower grade would necessarily have, and therefore it is not so well sustained as it ought to be. We commend its claims to the notice of those who are desirous to possess such a journal, as the ablest exponent of American science on this continent.

All communications are to be addressed to Silliman & Dana, New Haven, Conn.

The Atlantic Monthly has commenced the year under the most favorable auspices, and its January number is really a magazine calculated to add to the reputation of American literature, both abroad and at home. The contents are remarkably varied, and if they are samples of what is to come during the year, the public ought to be satisfied. We think the "Experiences of Samuel Absolem Fillibuster," the truest and best account of the campaign of General Walker in Nicaragua that has yet appeared in print, and it is as good to read as a chapter out of old Daniel Defoe. The beginning of the Professor's Story is promising, whilst Whittier's

The Household.

"She looketh well to the ways of her household, and existeth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

THE NEW YEAR.

BY SLOW JAMIE.

How few the fleeting days of man!
How short a time they last!
Another year forever gone,
Is numbered with the past.

A few more seasons hastening on,
Like those already fled,
Will measure out the destined span,
And snap our brittle thread.

Our life is but a winter's day,
Of mingled joy and pain;
The evening comes, we pass away,
And ne'er return again.

Yet the remembrance of that day
With us shall ever go,
Throughout a dread eternity
Of endless bliss or woe.

The dreary cold of winter flees
Before the smiling spring,
The darkness of the night is chased
By morning's rosy wing.

But on the cold, dark night of death
No opening morn shall break,
Until the final trumpet sound
And all the dead awake.

Winter Work.

"Well, Mary, the hurry and bustle and excitement of the holidays are past, and now if you cannot help me invent some new amusements to pass away the time, I do not see how we are to get through the rest of the winter. I will be so dull, and you will get homesick, and I shall have the blues, and we shall both lose our senses before spring."

"No fear of any such calamity happening to me," said Mary, who had come from her country home to stay through the winter with her city cousin. "I shall not get homesick while I have something to keep my hands busy, and I have provided for that before hand, so that in case you had no work to give me after our holiday playspell was past, I should have some of my own."

"Work!" exclaimed Lucy, with a little contemptuous surprise in her tone; "who was talking of work? I thought you came here to be free of work for the winter, and rest yourself, and was thinking what I could do to amuse you and keep up my own spirits; I am not good at invention, and thought you might help me."

"Why, how did you pass last winter, Lucy?"

"Last winter? O don't mention it. The whole three months was as good as thrown away, and yet I never worked harder in my life. There was mother and I, we counted up the days and hours after we got through, and it was just ninety days, averaging fourteen hours a day, that we worked on those two pieces of worsted work, Pharaoh's Daughter, and the Woman at the Well, and then it took us nearly the whole summer to make that silk not shawl and get it and the pictures ready for the Fair. We might as well call it the whole year thrown away, for what was the premium of two or three dollars on the pictures and a complimentary notice of the shawl in comparison to the time and work they cost? And they are of no earthly use to us now, for who would want to wear a shawl after it had been hung up for show at such a place? and as for the pictures I can't bear the sight of them since I heard the remarks made about them by the people at the fair, who criticised them over my shoulders till I felt my very ears tingle with shame. Of course they, honest folks, did not know who was listening! But I am done working for fairs. The trifling premiums they offer do not pay for the materials you work up, to say nothing of the time and labor thrown away."

"Why not make something useful then; something that would be of value to you or some one else after the fair is over?"

"Useful What can I make that is useful in your meaning of the word? Linsey-woolsey, tow cloth, rag carpets and patch work quilts are quite out of my way. But what work have you on hand that you are so ambitious about as to take it visiting with you?"

"Something that I intend to show for premiums at the next Fair, and then to use for comfort the winter after," replied Mary, taking from her trunk as she spoke a skein of soft white yarn; and pointing at the same time to several other skeins of a dark, blue-gray color that were snugly packed in one corner.—

"This is for myself, and with the gray I shall make a pair of socks for father and for each of my brothers. I finished a pair of white stockings for mother before I came away, and now in a briefer time than it took you to make Pharaoh's Daughter, I shall have completed seven pairs of fine warm socks and

stockings which, besides helping to add to the interest of our exhibition of Domestic Manufactures at the Fair, will be a great comfort to us all afterward."

"You expect to get premiums on them all, of course," said Lucy, "or you would not be at the trouble of showing them."

"No; I hope some younger and poorer girl than I am will draw the prizes. I think if the mere making of money is all the object we have in view, we had better do something else with our handiwork, than carry it to an agricultural Fair."

"Well," said Lucy, "it looks to me now like a great piece of folly when I think of the weeks and months I spent over those miserable pieces of canvas and worsted. I own I have been vexed a thousand times with myself for doing so; but then you know we city girls have not been taught to look upon such things in the practical way you do, and I was so silly as never to think but what if I drew the premium it would be so much clear gain, and I felt almost angry that they did not come directly to me and put the money in my hands the moment the decision was made. Now I wonder they ever would pay it all, unless they want to encourage more such folly and wicked waste of time.—But after all, I cannot follow your example, Mary; I have no brother to knit for, and father buys his stockings, and so do mother and I."

"Are there no destitute families in this great city, with children scantily clothed and suffering with this pinching cold?"

"Yes; many that I know who would be glad of the coarsest covering for their little feet. I have often given them old clothes, but never thought I could do more."

"Put on your cloak and bonnet, Lucy; we will buy some yarn that will be suitable for that purpose, and for the month to come your knitting needles shall keep company with mine, and we will see if either of us get homesick, or have the blues, or lose our senses before spring. If you clothe half a dozen little feet with warm stockings, you will be happier than if you drew premiums on a dozen worsted caricatures of Pharaoh's Daughter, and the Woman at the Well."

Claims of Farmers' Wives.

Your Clinton county correspondent, commenting on a former article under the above head, published in the FARMER, says, "No woman worthy the name of wife, will ever be compelled to be a beggar at her husband's purse strings, unless that husband is unworthy the name." Verily, if this is so, there are but few wives, or husbands either, I fear, that are worthy the name.

Again he says, "The husband and wife should look upon each other as equal partners in their business," &c. This is right.—

She should be equal. It was evidently the design of the Creator that the wife should be her husband's equal, not above him or below,

not his better or worse half, but his equal in the highest, broadest sense of that term; but I have yet to see that husband that looks upon his wife, in practice as well as theory, as his equal partner in business, with the same right to their joint earning as he has himself. But then he asks, "Is it not the sweetest drop in the cup of conjugal felicity that the wife is dependent upon the husband? what wife would be otherwise, if her husband is worthy of the trust and confidence which it is the nature of woman to repose in the object of her affections?" I think our Victor friend may be mistaken with regard to "woman's nature," or a wife's nature at the least; she does not crave a greater degree of dependence than the husband, and there can be no necessity for it if she is his "equal partner in business"; and is he not aware that we can have too great an abundance of even a good thing?

It is no "sweet drop in the cup of her conjugal felicity" to feel her dependence to the extent that some wives are made to; a dependence sufficient to repress all their energies and render them nonentities, as it were, in the scale of being. For no matter how high a woman's views or aspirations may be with regard to herself or her children, or neighborhood, she is perfectly powerless without her husband's concurrence, to carry them into effect; and how often does she deny herself of every household comfort that she can possibly get along without, rather than endure the contention and strife that her requests for money are sure to create?

Lastly, your correspondent exhorts husbands to "give their wives all the money they ask for, and when they ask for it, and do it cheerfully." Here again, if she was an equal partner in business, there would be no necessity for her asking. Allow me to say to you my Victor friend, if you have tried this plan and do really "know from experience" that

it works well, it is your duty to try to convince your fellow husbands of the fact. But we will be satisfied with an equal dividend, or even a per centage; for I don't pretend to say what some wives would spend money indiscriminately, or even extravagantly if they had all they wanted, and when they wanted it.—Let us first become accustomed to having money. A lady (a farmer's wife) told me that she had shaken her money with some crumps from her pocket into the swill pail, and it had been fed to the hogs, and accounted for it by her being so unaccustomed to having money that she did not know what to do with it. I wish to have it distinctly understood that I do not accuse all husbands of this penny pinching propensity; there may be some noble exceptions. Our Clinton county friend no doubt is one. I have assumed the fact of his being a man and a husband, thinking that no woman and wife could subscribe to that article as one "knowing these things by experience," I wish to say in this connection that it is from no vain desire to see my name in print, that I have taken to scribbling for the FARMER. I would elevate the wife and mother in her own estimation, and consequently in the scale of being—not by whining around woman's right's conventions, monthly asking the privilege of thinking for herself, and being somebody in the world, but by calmly, quietly, and with dignity, claiming and maintaining her own social and domestic rights first; and, as an initiatory step, I would advise her to have her own purse.

Now, I do not wish to be understood as advocating separate interests of husband and wife, or of "putting asunder that which God has joined together," for I do firmly believe that a wife can love her husband just as sincerely and truly with a few dollars in her pocket as she can without!

I have many reasons for advocating the separate purse system, but fearing that I am forfeiting my claim to "brevity" if not good sense, too, I will only name one. Let me ask any reader of the FARMER are you not happier for having the undisputed title to a little money? a wife is no exception to the general rule. Give her the means and she will

"Scatter blessings with a liberal hand."

and smoothe the wrinkles from many a brow of care.

A FARMER'S WIFE.

BY SLOW JAMIE.

A Wicked Woman.

Among the sprightly daughters of Michigan Mrs. Cummings is the most cheerful. Although past the meridian of life her black eye is still bright, and her step elastic as ever. A merry heart, which the wise man tells us is a continual feast, seems to be her portion; yet she is far from being a saint, as will shortly appear.

First. Mrs. Cummings will try to cheat. Often will she step into your door and with a smile, remark, "Here is a mess of green peas, or here are a few fresh cherries (as the case may be) which were sent you," endeavoring to leave you in doubt whom you are indebted to. But you know very well the bearer was the sender. If you go away and leave your door unlocked, perhaps you will be surprised on your return with a dish of early tomatoes, or a bowl of fresh raspberries, sitting on your table and seeming to say, "Guess how I got here."

Second. Mrs. Cummings will lie. When she has taken the greatest pains to oblige you she assures you, with the most bare-faced confidence, that it was no trouble at all—nothing but a pleasure.

When she asks you to carry home a basket of apples, she says they are worthless things, but hopes you can use them.—

You feel almost offended that she will offer you such an inferior article. However, out of politeness, you accept them, and on opening the basket find not only the choicest fruit, but probably some other nice present.

Third. Mrs. Cummings will steal. When children call into her house on some errand, she fills their mouths with plum cake, their pockets with toys, and their ears with stories. Thus she steals their hearts till their parents are pestered all the time for permission to go to Mrs. Cummings.

Fourth. Mrs. C. is selfish. All this she does for her own gratification. A smile on a child's face gives her so much pleasure that she studies every means to call it up. The happiness of others is a well spring of enjoyment to herself. Who then will deny that she is selfish in promoting the comfort of others?

And, finally, Mrs. C. is greedy. Wide as her field of enjoyment seems to be, she is never satisfied, but is ever on the lookout for fresh sources of gratification. Full as her cup is in this world, she really expects to drink of

the full river of pleasure in another. In short, she pretends to be a Christian. I might say more, but certainly this is enough.

You that will not follow a good example, go and imitate this bad one.

Fireside Fun.

In a Christmas letter to the Cincinnati Gazette, W. T. Coggeshall, State Librarian of Ohio, thus discourses on the effect of cheerfulness at home:

"How many men and women who are loved and honored in the world to-day, can trace the saving grace which gave them power to resist sore temptations, to familiar cheerfulness at the fireside of their childhood—cheerfulness which enabled son and daughter, in a confiding spirit, to get very near father or mother.

"Chess, backgammon, whist and newspapers are not enough for American firesides.—Lively conversation, pleasant jokes, jolly play, indeed, are required. Morals as well as manners—nerves as well as muscles, demand them.

"The father who plays blind-man's buff with his girls, will be less likely to grieve over runaway matches, than he who, in austerity, if not stupidity, flies to his office or counting house, to escape from the nonsense of the children; the mother who teaches her boys that if they have something worth laughing about, she would like to share the sport with them, will not as often mourn that her boys are imitators of ribald jokers, or victims of obscene or venial sportsmen, as she who in calm, unapproachableness, conscientiously reprimands, makes, patches and mends.

"But, 'familiarity breeds contempt,' says the proverb—one of the many things proverbs say out of which fools make lies—to which I answer, so be it, with inexpressible pity for the children of its object. No one but the king-fool of a serious family need be afraid of it.

"Neither business prosperity, nor financial distress—neither public duty, nor domestic tasks—neither lessons for every-day nor for Sabbath school, necessarily forbid lively plays or amusing talks at the fireside—or walks or rides, which all the family may enjoy—to which all may look forward—each one striving, with delight, to make a joke, or tell a story, or introduce a play—or describe a curiosity—or state a fact which may provoke laughter from, or suggest agreeable thought to the others.

"Families which thus cultivate gladness—thus exercise wisdom for recreation—two or three, now and then meeting together, but none neglecting the home circle, have no sorrows over street brawls, or midnight marauding among their boys—over wicked gossip or idle gadding among their girls—over lounging about groceries, for politics and tobacco, or petty scandal, among their men.

"Legitimate business and household fun give zest to each other. Home play and school study, directed as they may be, by wise encouragement better than by inflexible restraint, prepare for and make one another delightful.

"Think of it, parent of one or of many children! How glad were the little folks of your household this blessed Christmas morning! Can you describe the sparkle there was in their eyes when they went to bed last night, hoping and trusting in Kris Kringle or Santa Claus? Did not your youth come back to you, with delightful memories, when you listened to the outbursts of boisterous thankfulness, of genuine gladness, which greeted the well filled stockings in the corner, or the curious Christmas tree in the centre of the parlor, when all the children had danced down stairs in their night gowns, regardless of jack frost?

"If you are not a victim of pinching poverty, or distressing disease—in which case may you have been gladdened by a timely gift—if you are not crusty and miserly—in which case may all the children of the neighborhood beseech you for gifts till bed time—if you are not prim and self-santimonious—in which case may every ingeniously mischievous child of your acquaintance cut up a thousand capers on your best carpet, in the midst of your best furniture—you have seen joy enough to-day to give you a right glad heart. Let it express itself. You have eaten a hearty dinner, it is fair to presume, and you are complacent and indulgent; have a familiar, humor-eliciting talk or a good romp with the children then, or a mirth provoking game. If you cannot talk or play yourself, listen and laugh while you encourage the little folks to be as merry as they know how to be. Your good dinner will digest satisfactorily. Your sleep will be sound, or, if you dream, it will be of—

"scenes of your childhood, Which fond recollection presents to your view; The orchard, the meadow, the deep tangled wildwood, Or some other spot that your infancy knew."

"You will be more cheerful to-morrow, for the fun of to-night; in your office, your shop, your kitchen, or your sitting room, will work more effectively, and with less fatigue than is customary.

"Try the experiment. As the little folks say of a sweet kiss, in their play of Marching to Quebec,

"It can do you no harm, but a great deal of good."

"If it does, profit by our experiment. If it is a new experience, my word for it, your fireside will become dearer to you than it was the last year. You will see new gifts and new beauties in your children. They will find new charms for love and trust in father or mother—new causes for confidence in each other—new assurances that

"Mid pleasures and palaces, tho' they may roam, Be it ever so humble, there's no place like home."

Thinking and Acting.

Here is a man that has been poor; that has been a slave to a trade; that has scarcely been able to pay his rent, and provide for the wants of the family that has been increasing about him. He says, "So long as I live in this community, I shall be a drudge. I will go to the territories. I understand that in Iowa, and Minnesota, and the other newly settled parts of the country, a man can get a living much easier than he can here." This is what he thinks of when he comes home from work, cold and supperless. He lies down, and, ha'f asleep, he says, "Oh, if I were only there!" He pictures to himself vast wheat-fields, and imagines that he has a hundred acres of corn, and it seems to him that the ricks and barns cannot hold his abundance; and, before slumber overtakes him, a smile lights up his grim face, as he thinks what he will do, and have, and be, when he gets West. He fancies that he will secure houses and lands, and have all the com'orts of life, and be justice of the peace, if not a member of the Legislature. In the midst of such reveries he drops asleep. In the morning he wakes up pained and almost disappointed to find that he must resume his accustomed tasks; and he says, "I almost thought, last night, that I was out there, but I see that I am not." And so he goes on, month after month, and stays at home, and performs his drudgery, just because he merely thinks about going West, and wishes he was there, and pictures in his imagination the advantages he would gain by being there, without taking any steps to get there."

Another man in the same neighborhood, goes with him for a while; but a day comes when his hardships seem a little too severe to be borne, and he says, "There shall be an end to this. I have made up my mind. You may be a fool, and stay here, and be drudge, if you want to; but I shall not for anybody; I am going!" "Ah!" says the other man, "I think I will go, too, but—but, you know, is the gate out of which all hell comes; or he says, "I will go if"—and if is the other leaf of that gate, for it is a double-leaved one. He is afraid that if he starts, he will not be able to get there. He does not know as he can get money enough to go with. He fancies that the fatigue of the journey might be too great for him. The thought comes into his mind that if he should go away off there where he would be without friends, and he should not succeed, his condition might be worse than it now is. And when it comes to this: Will you make up your mind that on the first of March you will sell everything you have got—and that will not take long—and start? his courage flags and fails. Whereas, the other man says, "My condition cannot be much worse than it is now; and I would as lief die as remain in my present condition; so I will go on the first of March, if I have to go on foot every step of the distance." And if you bring up this and that difficulty in the way of his going, he says, "I am not going to borrow any trouble about the matter: I am determined to go, and go I will." And that man goes, and succeeds, and is, perhaps, sent to Washington as a representative—no great rise, but still something! Beecher.

From nature man derives everything. The spider taught him weaving; the fish furnished the idea of a boat; the swan the pleasing model of the sail; the palm led to the erection of a pillar; the skin of the brutes gave us the idea of dress, and the coco-nut led to the beer jug. The tax on wood alone appears to be purely a human invention.

What Literature is.—Poetry is said to be the flower of literature; prose is the corn, potatoes and meat; satire is the aquafortis; wit is the spice and pepper; love letters are the honey and sugar; letters containing remittances are the apple dumplings.

A Comparison.—A pleasant, cheerful wife is a rainbow set in the sky, when her husband's mind is tossed with storms and tempests; but a dissatisfied and fretful wife, in the hour of trouble is like one of those fiends who delight to torture lost spirits.

THE MICHIGAN FARMER.

THE NIGHT AFTER CHRISTMAS.

[Everybody knows by heart the famous poem beginning, "Twas the night before Christmas, &c., The following capital parody appears in the New York *Courier and Enquirer* of last week:]

Twas the night after Christmas, when all through the house,
Every soul was abed, and as still as a mouse,
Those stockings so lately St. Nicholas' care,
Were emptied of all that was eatable there.
The darlings had duly been tucked in their beds—
With very full stomachs and pain in their heads.

I was dosing away in my new cotton cap,
And Nancy was farther gone in a nap,
When out in the Nurs'ry arose such a clatter,
I sprang from my sleep—crying—"What is the matter?"

I flew to each bedside—still half in a doze,
Took open the curtains and threw off the clothea.
While the light of the taper served clearly to show
The piteous plight of those objects below,
For what to the fond father's heart should appear,
But the little pale face of each sick little dear,

For each pit that had crammed itself full as a tick,
I knew in a moment now felt like old Nick.

Their pulses were rapid, their breathings the same,
What their stomach rejected I'll mention by name—
Now Turkey, now Stuffing, Plum Pudding of course,
And Custards, and Crullers, and Cranberry sauce,
Before outraged nature all went to the wall,
Yes—Lollypops, Flapdodle, Dinner and all,

Like pellets, which urchins from pop guns let fly,

Went figs, nuts and raisins, jam, jelly and pie,
Till each error of diet was brought to my view,

To the shame of Mama and of Santa Claus too.

I turned from the sight, to my bed room stepped back,

And brought out a bottle marked "Pulv. Ipecac,"

When my Nancy exclaimed—for their sufferings

shocked her—

Don't you think you had better, love, run for the Doctor?

I ran—and was scarcely back under my roof,
When I heard the sharp clatter of old Jalap's hoof,
I might say that I hardly had turned myself round,
When the Doctor came into the room with a bound,
He was covered with mud from his head to his foot,

And the suit he had on was his very worst suit;
He had barely time to put that on his back,

And he looked like a Falstaff half fuddled with sack.

His eyes how they twinkled! Had the Doctor got

merry?

His cheeks looked like Port and his breath smelt of Sherry,

He hadn't been shaved for a fortnight or so,
And the beard on his chin wasn't white as the snow.

But inspecting their tongues in spite of their teeth,

And drawing his watch from his waistcoat beneath—

He felt of each pulse,—saying—"each little belly

Must get rid!"—here he laughed—"of the rest of that jolly!"

I gazed on each chubby, plump, sick little elf,

And groaned, when he said so,—in spite of myself,

But a wink of his eye when he pinched our Fred,

Soon gave me to know I had nothing to dread.

He didn't prescribe—but went straightway to work,

And dosed all the rest—gave his trowers a jerk,

And adding directions while blowing his nose—

He buttoned his coat from his chair he arose,

Then jumped in his gig—gave old Jalap a whittle,

And Jalap dashed off as if pricked by a thistle,

But the Doctor exclaimed ere he drove out of sight,

"They'll be well by to-morrow—good night! Jones—

good night!"

For Boys to Read.

To be a man—a true man—such a man as the new age, which the young men of the present day are about to assist in inaugurating, demands—is no small thing. To meet fully the requirements of to day and of the future, you must be a healthy, well developed, many-sided, symmetrical man—a man with a sound body, a strong, disciplined intellect, and a large, brave, pure heart.

1. In the first place, you must be a man physically. Do not young men (and we address ourselves especially to young men,) underrate this requirement. Physical health and efficiency—soundness of bodily organization and regularity of functional action—lie at the very foundation of all useful acquirements. Leave the body out of the account, in dealing with earthly affairs, and it is in vain that you bring in everything else. Hear the confession of the late lamented Horace Mann on this point:

"I am certain," he says, in his "Letter to a Student at Law," "that I could have performed twice the labor both better and with greater ease to myself, had I known as much of the laws of health and life at twenty-one as I do now. In college I was taught all about the motions of the planets as carefully as if they would have been in danger of getting off the track if I had not known how to trace their orbit; but about my own organization, and the conditions indispensable to the healthful functions of my own body, I was left in profound ignorance. Nothing could be more preposterous. I ought to have begun at home, and taken the stars when it should have come their turn. The consequence was, I broke down at the commencement of my second year, and have not known a well day since."

In preparing, therefore, for the great work of life, take the body first. If you have good health, thankfully hold it fast; cherish it with jealous care, as a priceless treasure. As a capital on which to commence life, rolls of bank-bills and bags of gold are not to be compared with it. Like any other capital, it may be increased or diminished. Year by year you may grow richer in vital resources, or you may, by extravagant and foolish expenditures, fall into poverty and bankruptcy.

If you have a strong, well-developed, symmetrical body, see to it that it do not deteriorate. If it be not absolutely perfect, it may be improved. Strengthen and harden your muscles, throw back your shoulders, ex-

pand your chest, deepen your respiration.—All this may easily be done, and the "How to do it" is clearly explained in books which are within the reach of all.

Be a man physically—a man in bone, and muscle, and nerve. Be not ashamed to learn a lesson from those glorious old pagans, the ancient Greeks, whose young men were wont to esteem the simple crown of green leaves, which was placed upon the brow of the victor in their noble athletic games, as a decoration more to be coveted than the diadem of a king.

2. With the sound body, you need, in order to be one of "the men of the time," a strong, well-cultivated, and strictly-disciplined mind—a mind competent to grapple with the highest political and social problems.

Here, again, you may be almost anything you desire to be. The brain, like the lungs or the limbs, is developed by exercise. The faculties of the mind, in common with the muscles of the body, are continually strengthened by judicious use.

Schools and teachers are good in their way, but the young man must not depend wholly upon them, even where he can command the best of both. You cannot dispense with self-culture. There is much to be done that no one can do for you. Our greatest men are self-made men; and, whatever may be your condition in life, you must, to a great extent, make yourself or be never made.

Learn to think—to think consecutively; be patient in your investigations; avoid hasty generalizations; accustom yourself to the methodical arrangement of thoughts and facts; study to express yourself clearly—to say just what you mean and no more or less, and to waste no words. First develop and then discipline every faculty of your mind.—Be a man intellectually—a sound man—a clear headed man—a man who knows what he is about.

3. But, with all the rest, you must be a man of heart. The healthy body and the sound mind may make you in one sense a great and successful man, but scarcely a good or a happy one. You will have power to do, but what will you do? We cannot feel sure that it will be the right thing. To become truly an honor to your country and age, and a benefactor of the race, the affections and moral feelings must have due development and cultivation. To be wholly a man, you must carry a man's heart in your bosom—a heart loyal in every pulsation to family, friends and country. You must be a dutiful son, a loving brother, and, if you have assumed those relations, a tender husband and father. You must be true as steel to your friends, whatever wind may blow; you must love your country, and be ready to serve her if she need your service, you must stand firm in your integrity as a man among men, and in the sight of God.

And this is not all. Having the ability to do, you must use it. If you claim to be a man, you must do a man's work in the world, and do it cheerfully, bravely and faithfully.—There is no room for idlers in this work-day world. There is enough to be done. If you are not willing to do your part, just step aside and make room for those who are better disposed. There is a time for play and a time for rest, but there is none for idle loitering. Be up and doing.

In body, mind, and heart—in being, thinking, feeling, and action, BE A MAN!—Life Illustrated.

Household Varieties.

Women and Literature.—The literature of three centuries ago is not decent to be read; we expunge it. Within a hundred years woman has become a reader, and for that reason as much or more than anything else, literature has sprung to a higher level. No need now to expunge all you read. Woman, too, is now an author; and I undertake to say, that the literature of the next century will be richer than the classic epochs, for that cause. Truth is one, absolute; but opinion is truth, filtered through the moods, the blood, the disposition of the spectator. Man has looked at creation and given us his impression, in Greek literature, and in English, one sided, half-way, all awry. Woman now takes her stand to give her views of God's works and her own creation; and exactly in proportion as woman, though equal, is eternally different from man, just in that proportion will the next century be doubly rich because we shall have both sides.—Wendell Phillips.

How a French Mayor Cures Smoking.—The Mayor of Douai, in a circular to the communal school-masters, expresses his determination to put down the precocious habit of smoking, which he learns by the report of the police prevails to a deplorable extent among the boys of that city.—He therefore desires the schoolmasters not only to mark down for punishment all children whom they may see smoking in the streets, but to search the pockets and portfolios of the scholars from time to time, and to take away all cigars, cigarettes, pipes and tobacco which may be found. He authorizes the most severe punishments, and will devise any measure which the schoolmasters may devise to check the growing evil.

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Every day Exaggerations.—"I am tired to death." So you have said often, and are alive still and in good health too.

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"I would not do it for the world." And yet you have done many things equally as bad for a penny.

"We were up to our knees in mud." You know very well the dirt was not over your shoes.

Truisms.—Borrowed garments seldom fit well. Haste often trips its own heels. Men often blush to hear what they are not ashamed to act. Pride is the flower that grows in the devil's garden.—More are drowned in the wine-cup than in the ocean. He who buys too many superfluities, may be obliged to sell his necessities.

Charade.
My first is a river in England.
My second is an exclamation.
My third is a measure.
My whole is a plant that grows more luxuriantly the more it is crushed.

H. W. J.

Answer to Biographical Enigma of Dec. 24th:
Commodore Stephen Decatur.

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THE MARKETS.

Flour and Meal.

Notwithstanding that excellent sleighing exists in the country produce is coming in very slowly, and as a consequence the market presents this week a very quiet aspect. Flour is extremely dull and inactive. Grain generally, is in good demand, and some varieties, as corn and oats, are higher than last reported. For dressed hogs the market is about over. Shippers have ceased operations; packers are almost through and the market drags on more heavily than it has at any time since the opening. Prices consequently are lower and tend downward. Butter and eggs are also dull and lower. The probability is that we shall now have for a few weeks, dull markets in all branches of produce.

Flour—Very few sales take place in the flour market and none for shipment. We quote flour dull at \$4.75 per barrel, \$5 for extra and \$5.25-\$5.50 for double extra.

Wheat—There is a good milling demand for wheat at \$1.06 a bushel for common to prime red, \$1.17 a bushel for white, and \$1.23 a bushel for extra white. Of the latter, there is little or none in market.

Corn—Firm and 2dce better. In bags, delivered, 60¢ is now charged by dealers but on the street the market price is 55¢ shelled, or 52¢ on the cob. There has been considerable activity in this grain.

Oats—Since our last report have advanced to 37dce; the inside figure being paid by the load on the outside in bags from second hands. The market has ruled active and buoyant.

Rye—in this grain there is very little doing. We quote rye 65¢.

Bailey—the market is again a trifle firmer and a few cents better than a week ago. Prime barley is worth \$1.01 a bushel. Common to fine \$1.20-\$1.25 per cwt.

Potatoes—Little or nothing is doing in the potato market. We have no quotations.

Apples—Firm and unchanged.

Butter—Dull and lower. The range for common to prime is now 12½-15¢. The supply is quite large.

Eggs—Also dull. By the barrel, they are worth only 2dce.

Mess Pork—Held at \$16 per barrel, with very little doing.

Dressed Hogs—Dull and declining. For some time past good heavy hogs have been worth \$6 but now \$5, \$5½ is the highest figure obtainable. The entire range for medium and heavy hogs is \$5.50-\$6.50.

Hides and Pelts—Green hides bring 4½¢, though 5¢ is sometimes paid for heavy. Dry bring 10-12¢. Sheep pelts in fair demand at \$1,000-\$1,25 for December pelts.

Live Stock.

Cattle—Dull at former quotations. Very prime cattle bring \$5.50, ordinary \$2.50 per cwt. The large supply of dressed meats affects the live stock market unfavorably.

Sheep—Market quiet at 2.50-3.00 per head for good sheep.

Hogs—Very little has been done in the hog market for a week past, except in a sort of retail way. We quote for good fat hogs \$4.50-\$5.

1860. THE **1860.**
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